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APPLICATION FOR LETTERS PATENT

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**CUSTOMER PROCESSING FOR PURCHASING ON THE**  
**INTERNET USING VERIFIED ORDER INFORMATION**

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# **Customer Processing for Purchasing on the Internet** **Using Verified Order Information**

## **1. TECHNICAL FIELD**

The technical field of this invention is methods and systems for purchasing on the internet or other global computer information network without need for transferring charge card numbers or similar sensitive financial or personal account information during the purchase transaction.

## **2. BACKGROUND OF THE INVENTION**

### **2.1 Internet Purchase Transactions**

The volume of commercial transactions being conducted by communication over the internet has grown dramatically. These transactions typically include placement of orders by purchasers using a merchant or plural merchants who are paid by one or more credit card companies or banks using credit or debit accounts. This trend will continue and the volume of purchase transactions conducted over the internet will increase, probably at an accelerating rate.

A typical internet purchase transaction includes an order which is placed with a merchant. The order information is assembled by the customer, typically using the customer's name. If the customer is a company or other organization, then the order

1 will include both the company name and the name of the person who is using the  
2 computer. Such user names are also included to better process the order and  
3 provide greater accountability.

4 The home address, business address, or other mailing and/or billing addresses  
5 are frequently required by the merchant during the order session to create an order  
6 file. Also included as part of the order information is the shipping or delivery address.  
7 If the order is for shipment to a third party, then the shipping or delivery address is  
8 different from the customer address.

## 9 **2.2 Order Response Communication**

10 Internet purchasers are also typically invited to provide an email address to  
11 which an order response communication can be sent. Alternative order response  
12 communications can be used, such as phone, letter or other. The order response  
13 communication is most often in the form of a confirmation communication providing  
14 the customer with pertinent transaction information and a message which reassures  
15 the customer that the order has been successfully communicated and is being  
16 processed.

17 Additional information which may be gathered in connection with an internet  
18 purchase may include telephone contact information, purchase order numbers,  
19 invoice numbers and additional billing or customer information.

1 In most internet purchase transactions the order is processed and paid using  
2 a bank credit or debit card. The information provided by the customer includes an  
3 account number, card expiration date, card holder's name and the type of card being  
4 used. The charges for the order are posted against the customer account number as  
5 a charge entry or entries. These entries can be either a credit charge entry or a debit  
6 charge entry, depending on whether the charge account is a credit card account or  
7 a debit card account.

8 Placement of orders for internet purchasing using charge card accounts is now  
9 widely conducted using the limited information just described – account name,  
10 account number, and expiration date. This information is available on the face of  
11 most charge cards. Because of this, it is relatively easy for a thief using a stolen  
12 charge card to purchase items over the internet. The frequency of internet charge  
13 card fraud is increasing and the associated costs are also rising. Whether the order  
14 is authentic or a fraud is almost impossible to determine unless the charge card has  
15 been reported as stolen and been deactivated.

### 16 **2.3 Initial Processing By Merchant**

17 After an internet purchase order is placed, the merchant then undertakes initial  
18 processing of the order. Initial processing includes a merchant's review of the  
19 requested goods or services to determine whether the order can be properly

1 processed and whether the ordered goods or services can be provided to the  
2 purchasing customer. This initial processing varies from one merchant to another.

3 A common initial processing sequence is for the merchant to first analyze the  
4 customer purchase order file to see if all necessary information has been provided.  
5 This can be done while the customer is in active communication with the merchant  
6 over the internet. Alternatively, the customer order can be checked or double  
7 checked after the customer's session with the merchant's web site has been  
8 completed. The order file review performed by the merchant checks for completeness  
9 to make sure that sufficient information has been provided for the merchant's further  
10 review and processing of the customer's order.

11 The merchant's initial processing of an order usually leads to an initial order  
12 response communication. The initial order response communication can be in various  
13 forms and is used to communicate results of the initial processing analysis. For  
14 example, the initial order response may communicate confirmation of the order, a  
15 query for additional information, or a refusal that declines the order or explains some  
16 other alternative.

17 Initial order processing by a merchant may also include inventory review. Such  
18 inventory review analysis considers the merchant's inventory of goods or resources  
19 available for providing services. This is assessed against previous orders to  
20 determine if and when the ordered items can be provided.

1 Another step or phase of initial processing may include payment assessment.  
2 Payment assessment of an internet order is performed to determine whether the  
3 customer has adequately arranged for or provided payment for the ordered items.  
4 The merchant considers the payment information contained in the order and then  
5 decides whether to accept or reject the order on this assessment.

6 One widespread form of payment assessment involves orders placed using  
7 credit or debit cards as the means for payment. The customer provides sensitive  
8 charge account information via the internet as explained above. This information is  
9 then used by the merchant to determine whether the customer's account can be  
10 charged for the ordered items to pay the merchant. The ordered items may be goods,  
11 services or a combination of goods and services.

## 12 **2.4 Prior Art Communication of Account Information**

13 The current practice involves not only the communication of sensitive account  
14 information between the customer and merchant when the order is initially placed, but  
15 also the secondary retransmission of this account information between the merchant  
16 and the bank card company. The order is usually accepted by the merchant after  
17 receiving charge authorization from credit card companies, such as VISA™,  
18 MASTERCARD™, DISCOVER™, and AMERICAN EXPRESS™, or processing  
19 companies working in their behalf or service. The established approach involves two  
20 or more transmissions of the customer account name, account number, expiration

1 date of card, and the amount to be charged to the customer's account for the ordered  
2 items.

### 3 **2.5 Dishonored Bank Card Account Transactions**

4 Submission of charge requests to the bank card processors for authorization  
5 does not necessarily result in a merchant receiving actual payment. Most businesses  
6 receive the customer order and submit a request to the bank card processors for  
7 authorization to charge a particular customer's account. In some cases this involves  
8 two separate queries by the merchant.

9 In reviewing a charge request, a first analysis is performed by the bank card  
10 processor to determine if the account is valid and active. In a second query, the bank  
11 card company or another related bank card processor performs a second analysis to  
12 determine if the account has sufficient credit or funds. Both of these queries can also  
13 be performed in a single request to a single processing operation serving the  
14 merchant or charge card company being used.

15 The bank card processor responds to the merchant's request for authorization  
16 at the time of submission of the authorization request. This can be at or near the time  
17 the order is placed or the sale transaction is being conducted. The submission of an  
18 authorization can also occur at a later time, particularly when the merchant is taking  
19 numerous orders at a substantial frequency. Depending upon the merchant's  
20 business, an authorization request or requests can also be routinely submitted later.

1 For example, telephone orders can be processed later in the day or next day, and/or  
2 prior to shipment of the goods or rendition of the services.

3 Surprisingly, although a merchant may receive a positive authorization to  
4 charge from the charge card processing company, this does not insure the merchant  
5 will actually be paid on the transaction. This uncertainty arises because merchants  
6 submit their charge card sales to a designated processing bank for payment to the  
7 merchant's account. This is usually done in the form of an electronic file which is  
8 submitted hours or even days after the authorization request may have been  
9 submitted by the merchant, and approved by the bank card processor. The actual  
10 requests for payment are submitted usually at the end of the business day, but can  
11 be at various times.

12 Whatever the merchant's practice, there is an inherent delay between the time  
13 the request for authorization to charge is approved and the time the merchant makes  
14 an actual demand for payment. The demand for payment is made at the time such  
15 demand is processed at the merchant's processing bank. Under the terms of the  
16 merchant's agreement with the bank card company, the charge may or may not be  
17 paid. For example, if other merchants or banks have in the meantime requested  
18 payment or advanced cash so that the customer's account has reached its available  
19 credit limit or account balance, then the merchant's demand for payment may be  
20 dishonored even though it was previously authorized. Depending on the  
21 circumstances, the merchant may end up being paid later or never. Merchant's



1 suffering such dishonored charge transactions are dissatisfied since authorization was  
2 given to charge against the account. Nonetheless, the terms of the merchant's  
3 agreement with the charge card company will be determinative, and many or most  
4 card companies have the ability to dishonor a charge if the account exceeds the  
5 available credit limit or account balance.

6 The merchant's decision as a result of the initial processing is most frequently  
7 to accept the order. However, the initial processing may be lengthened in some  
8 situations because a merchant may await irrevocable payment from the merchant's  
9 processing bank before shipment of goods. This can be done to avoid the risk that  
10 the charge transaction will be dishonored or paid late. However, it has the  
11 disadvantage of increasing the time between order and shipment. This delay to avoid  
12 dishonor may end up hurting the merchant's business in a general manner because  
13 of negative effects on responsiveness and business volume. This may be incurred  
14 to address the problem of dishonored charges.

## 15 **2.6 Order Acceptance By Merchant**

16 For internet purchase transactions, whether the merchant's initial processing  
17 response is acceptance, rejection, or request for additional information, a response  
18 is usually communicated by the merchant to the customer in a relatively short period  
19 of time, usually less than 1-2 days. This initial processing response communication

1 can be done in a number of suitable ways. Most typically, the merchant's initial  
2 processing response is communicated by sending an email to the customer.

3 Although a variety of formats are used for merchant initial processing  
4 responses, the responses usually involve sending a confirmation that the order has  
5 been received and accepted. An invoice or other transaction control number is  
6 usually assigned. The merchant also typically indicates that shipment has or will  
7 occur on or about an expected shipping date. Alternatively, the confirmation may  
8 state the customer should expect delivery at the delivery address on or about a  
9 certain delivery date.

## 10 2.7 Electronic Commerce Fraud

11 A substantial amount of effort has already been expended in setting up internet  
12 purchase transaction systems. Despite these earlier efforts, there is a continuing and  
13 increasing risk of electronic commerce fraud. The problem of internet fraud has been  
14 previously approached by creating secure or encrypted network communications  
15 techniques. Although the commercial establishments developing and using these  
16 techniques espouse confidence to the public, there are common fears that electronic  
17 commerce fraud will both escalate in number and become of greater value. ***The use***  
18 ***of secure or encrypted techniques are not effective where the account card or***  
19 ***key account information has been stolen and is being used fraudulently.***

1 Fraudulent charges may occur for some time before being reported or detected and  
2 the account is deactivated.

3 The internet or possibly other causes have also led to a growing problem of  
4 identity theft. This problem can have a devastating effect on the person who has their  
5 normal identity stolen. In identity theft, an impostor obtains sensitive personal  
6 information, such as social security numbers, bank account numbers, charge account  
7 numbers, driver's license numbers and other information having important  
8 identification attributes. The victim of identity theft is usually left with a number of  
9 overdue accounts having large balances run up by the impostor. The abused  
10 accounts are frequently discovered long after the fraudulent activity first began.

11 In many instances the victim of identity theft has difficulty in clearing their name  
12 from the abusive use by the impostor. This has led many such victims to change their  
13 names to alleviate the problems of credit record destruction and other effects of the  
14 identity theft.

## 15 **2.8 General**

16 Some or all of these problems and other objectives and considerations are  
17 addressed by the current invention which is described more fully below. Terminology  
18 and information used in this background discussion is also applicable to  
19 corresponding aspects of the invention as described below. The reader should also  
20 understand that some of the benefits and advantages of the invention are given in this

description, whereas others may become apparent later, in light of further use and study of the invention.

### **3. BRIEF DESCRIPTION OF THE DRAWINGS**

Preferred embodiments of the invention are described herein with the help of accompanying drawings which are now briefly described.

Fig. 1 is a block diagram indicating a prior art equipment arrangement for conducting purchase transactions over the internet. This diagram also shows some of the principal actions indicated by arrows.

Fig. 2 is a process block diagram indicating processing steps used in prior art internet purchase transactions, such as shown in Fig. 1.

Fig. 3 is a block diagram indicating an equipment arrangement for conducting transactions over the internet according to this invention. The diagram also shows some of the principal actions indicated by arrows.

Fig. 4 is a process block diagram indicating processing steps used in a preferred embodiment of the invention.

Fig. 5 is a diagram illustrating a series of exemplary screen displays during placement of an order by an existing customer account using the invention.

1 Figs. 6 and 7 are diagrams illustrating a series of screen displays and process  
2 steps involved in an alternative form of the invention wherein a new customer is  
3 processed partly on-screen and partly via telephone to effect customer set up.

#### 4 **4. DETAILED DESCRIPTION**

##### 5 **4.1 Introduction**

6 The current invention has several features, functions and aspects which are  
7 explained below. Additional aspects may also be appreciated from the background  
8 description given above and the claims presented hereafter.

9 The invention includes improved methods and associated systems for  
10 conducting a purchase transaction over the internet or other widespread or global  
11 computer information network or networks. The novel methods for conducting  
12 purchase transactions have a number of steps or phases with associated features.  
13 Also included are combinations and subcombinations of the enumerated steps,  
14 phases and features. The novel methods can be used in connection with a variety of  
15 purchase items, including either goods or services, or both, in the same or separate  
16 transactions.

17 In one aspect the preferred methods involve creating a customer account with  
18 a financial organization which is a bank, a business akin to a bank, or other similar  
19 financial institution functioning as provided for herein. For purposes of convenience,

1 such organizations shall herein be referred to simply as a bank. However, such use  
2 of this term should not be interpreted as implying any legal requirements for being  
3 called a bank, or implying attributes other than those which are at issue in the  
4 methods performed as described herein.

5 In the methods according to the invention, the bank provides a customer  
6 account which is associated with a customer. The bank has a record of the customer  
7 account that includes associated customer account information. In some  
8 implementations of the invention the customer account is set up prior to any purchase  
9 transaction over the internet. In other forms of the invention the customer account is  
10 in part created during an initial interaction between the customer and bank, such as  
11 via the internet. This is coupled with supplementary set up with the bank wherein the  
12 customer supplies additional account information later, or confirms initially provided  
13 account information in second or subsequent setup sessions.

14 Prior to providing further explanation of the methods according to this invention,  
15 the discussion will now turn to a description of a prior art internet purchase transaction  
16 with reference to Figs. 1 and 2.

#### 17 **4.2 Prior Art Internet Purchase Transaction**

18 Fig. 1 shows a diagram representing principal equipment and key actions  
19 involved in a common internet purchasing transaction. A customer computer 10 is  
20 operated by a human user (not illustrated), for example a person using his or her

1 home or office computer. The customer has an internet service provider with data  
2 processing equipment 12 that provides service to the customer allowing the customer  
3 to communicate over the internet 15 to a large number of internet web sites. The  
4 customer accesses web sites of interest in the well-known fashion. One web site is  
5 represented by the merchant's internet service provider with data processing  
6 equipment 18.

7 Fig. 1 also shows a merchant computer 20 which is under the control and  
8 direction of a merchant. The merchant computer provides the information which the  
9 merchant wishes to present to the public over the internet. This typically includes  
10 general company information and products and services which the merchant offers  
11 to sell. The goods and services may be produced or rendered by the merchant, or  
12 they may be produced, rendered and/or distributed through other businesses with the  
13 merchant being just an order processor or one of several sources for the offered  
14 items.

15 Communications links between the customer computer 10, customer internet  
16 service provider 12, internet 15, merchant internet service provider 18 and merchant  
17 computer 20 may use a variety of data processing communications vehicles. Future  
18 advancements in communications vehicles allowing such data processing  
19 communications are expected to perform the same or similar functions, or enhanced  
20 functions which are not yet available.

1 Fig. 1 also shows a bank computer 30. Bank computer 30 stores or accesses  
2 customer account information relating to the bank's customers who have charge  
3 accounts, such as VISA™ and MASTERCARD™. The bank computer or computers  
4 30 also perform certain analyses which are initiated by a merchant requesting  
5 authorization to charge a particular customer account.

6 Fig. 2 further illustrates steps performed in a typical prior art internet purchase  
7 transaction. The customer computer accesses the merchant computer in step 41 to  
8 obtain information relating to the customer's interest and planned placement of an  
9 order or orders.

10 Step 43 involves interaction between the customer computer and the merchant  
11 computer wherein the customer builds an order file. The order file includes the  
12 ordered items, the shipping or delivery address, the cost, **and sensitive customer**  
13 **charge account information**. As explained above the customer charge account  
14 information usually includes the account name, account number, card type, card  
15 expiration date and the amount to be charged the customer's account.

16 After the customer has provided such order file information, then the merchant  
17 checks the order file for completeness in step 45. In step 47 the purchaser submits  
18 the order file to the merchant. The merchant then performs initial processing in step  
19 49. The merchant's initial processing may include one or more analyses which  
20 implement the merchant's policies concerning submission and processing of customer  
21 orders. For example, the merchant may perform an analysis to see if the item



1 selected by the customer is available and the date of availability. This may be  
2 compared against management-determined ranges for acceptable delivery response.

3 The initial processing by the merchant computer also commonly involves  
4 payment analysis to determine whether the order has been placed using a payment  
5 method which is valid and authorizes payment. The payment analysis usually  
6 processes instructions from the customer computer to charge a bank card charge  
7 account, which can be either a credit or debit account associated with the customer.  
8 To properly process such a payment method, the merchant typically submits the  
9 requested transaction for approval or authorization by the bank card company or it's  
10 processing service, as illustrated in step 51 of Fig. 2. The payment analysis uses the  
11 customer charge account number, expiration date, cardholder's name, and the  
12 amount of the charges being submitted for approval.

13 Step 53 of Fig. 2 represents the bank's analysis of the authorization request.  
14 This bank card analysis uses the customer account number and internal information,  
15 such as the credit or account limit on a credit account or account balance on a debit  
16 account. The analysis determines whether the bank authorizes a charge to be made  
17 against the identified account. The bank then responds to the merchant in reaction  
18 to the charge authorization request in step 55.

19 The merchant then completes any additional order analysis or processing in  
20 step 57. Step 59 indicates communication of the initial order processing response

1 from the merchant to the customer. This can be a confirmation of the order, refusal  
2 of the order, or query for additional information.

3 If the initial response includes acceptance of the order, then the merchant  
4 charges the customer charge account with the bank, as illustrated in step 61. The  
5 merchant's acceptance of the order leads to shipment of the order as directed by the  
6 customer when the order file was submitted in step 63.

7 This prior art practice includes transmitting sensitive account information  
8 between the customer computer 10 and the merchant computer 20. Such  
9 transmission is a security risk when transmitted over the internet. The basic internet  
10 structure is an open computer architecture which allows free access to everyone and  
11 involves repeated copying and re-transmission of data being communicated.

12 Security is also compromised when the merchant computer sends an  
13 authorization request to the bank computer 30. Again, this risk is increased if it  
14 occurs via the internet. Security may still again be compromised if account  
15 information is used in the bank card company's response to the charge authorization  
16 request.

17 Since this sensitive business information is communicated at least twice with  
18 any number of relaying intermediary data processors in between, there is significant  
19 opportunity for interception. This is particularly true when the customer account  
20 information is communicated over the internet to the merchant which in itself may

1 involve numerous relays in transmission, all of which are openly available for others  
2 to access due to the open architecture of the internet.

3 The merchant's communications link with the bank computer may be either via  
4 the internet, or by dedicated secure communications vehicle, such as a dedicated  
5 telephone data transmission line or other suitable communications vehicles. Such  
6 "secure" transmissions may also involve numerous communications processors.  
7 These may or may not be susceptible to third party access for decoding and possible  
8 fraudulent use of the customer account information being communicated.

9 Another risk is associated with the employees of the merchant, bank, or other  
10 transmitters of account information. Even good organizations suffer incidents of  
11 embezzlement and absconding of information which can serve as the basis of fraud.  
12 Thus, it is inherent that current methods for handling charge card transactions are  
13 subject to fraud by manual and/or automated data interception.

14 The current methods for transacting purchases over the internet increase the  
15 risks of fraud because commonly transmitted charge account information used in  
16 each internet purchase is sufficiently complete to be used in the conduct of a  
17 fraudulent charge using another merchant who may be located anywhere in the world.

### 4.3 Preferred System Equipment Configuration for Invention

Fig. 3 shows a preferred equipment configuration and some aspects of preferred methods according to the current invention. Customer computer 10 is linked with the internet using the customer internet service provider computer 12. Data communications are conducted via the internet 15 between the internet service provider 12 and the merchant internet service provider computer 18. Merchant computer 20 is linked to the merchant internet service provider 18. All links use conventional data communications vehicles or suitable future technology communications vehicles.

Fig. 3 also shows merchant computer 20 communicating with bank computer 30. This can be a secure communications vehicle or via the internet as shown. The merchant internet service 18 connects through the internet 15 to bank internet service provider 28. Bank computer 30 is connected to the bank internet service provider 28. Bank computer 30 stores or otherwise controls access to customer account information and other bank information or third party information accessed by the bank computer.

Fig. 3 further illustrates customer computer 10 in communication with the bank computer 30 via the internet. Customer computer 10 is again connected by the customer internet service provider 12 to internet 15. Internet 15 is connected to bank internet service 28 and hence to bank computer 30.

#### 4.4 Preferred Communications Linkages

The diagram shown in Fig. 3 illustrates a significant difference utilized in some of the preferred methods according to this invention. Fig. 3 indicates that the customer computer 10, merchant computer 20 and bank computer 30 can be in simultaneous or effectively simultaneous communication. Simultaneous or effectively simultaneous communication allows one party to communicate with another and immediately thereafter the same party can communicate to another party thus allowing a three party data flow on a real-time or nearly real-time basis.

Simultaneous communication does not necessarily imply that all three parties are engaged in a multi-party communications session where all or more than two parties are receiving the same data, voice, video or other communications mode provided by or to all other parties. Instead, it is preferred that the simultaneously or approximately simultaneous communication between these parties is established by discrete communications linkages. These discrete communication linkages are advantageously not in communication with other linkages except as controlled by the merchant, bank or customer computers acting as communications nodes in the purchase transaction communications tree.

As illustrated, Fig. 3 most clearly indicates three discrete communications linkages which define communications routes between the three key parties – the customer computer 10, the merchant computer 20 and the bank computer 30. This

1 allows each of the three communicating pairs to communicate independently in a  
2 communications triad. In this communications triad each link communicates  
3 separately using different communications routes and/or vehicles. They can each  
4 also use different means for providing encoding, encryptions, data compression, or  
5 other data processing and communications techniques which make interception of  
6 meaningfully complete account information dramatically more difficult or effectively  
7 impossible.

8 These discrete communications linkages also enhance security for the  
9 processing of an internet purchase transaction without necessarily requiring use of  
10 encoding and encryption techniques because the linkages are independently created  
11 and would in general not share the same communications vehicles and relaying  
12 internet computers. Instead, for example, one linkage may be communicated by  
13 satellite through relaying computers between New York and Atlanta, whereas another  
14 linkage may be via optical fiber data communications land facilities between Miami  
15 and Atlanta. The third exemplary linkage may be by microwave transmission and land  
16 lines between Miami and New York.

17 The separation of certain data processing functions and key information to one  
18 of the three or more communications linkages in the purchasing transaction  
19 communications tree, thus provides increased security against surreptitious  
20 interception or collection of internet communicated files that have all the information

1 needed to effectuate a purchase transaction according to prior art techniques, such  
2 as discussed above for charge card transactions.

3 The above configuration advantageously includes having the customer  
4 computer establish one data communications link, sometimes referred to herein as  
5 a first data processing linkage having an associated first communication route. This  
6 is most preferably via the internet as illustrated so that the customer can in a  
7 conventional manner initiate shopping over the internet. This customer-merchant  
8 communications linkage can function in many of the conventional ways now known  
9 or hereafter developed.

10 The second data communications linkage is established between the customer  
11 computer 10 and bank computer 30 using an associated second communications  
12 route. The third data communications linkage is established between the merchant  
13 computer 20 and the bank computer 30 using an associated third communications  
14 route.

15 The first, second and third communications linkages are preferably initiated or  
16 established in an independent manner through independent communications  
17 initiatives and communicating using different communications routes. They also are  
18 preferably configured such that each is using a distinct communications vehicle or  
19 vehicles so that the data involved with the same internet purchasing transaction does  
20 not get transmitted over the same communications vehicles in the same or a related

1 transmission. This provides inherent added security for this internet purchasing  
2 transaction data communications equipment arrangement.

3 It should also be recognized that one or more of the communications linkages  
4 in the purchase transaction communications tree may alternatively be via a  
5 non-internet communications vehicle. For example, the customer-merchant  
6 communications vehicle is via the internet as illustrated. The second communications  
7 link between the customer computer 10 and bank computer 30 also is preferably via  
8 the internet for ease and economy. Alternatively, the customer may for specific  
9 reason have another linkage which is preferably a secure or dedicated  
10 communications link with the bank.

11 The third communications linkage is between the bank and merchant and is  
12 also preferably via the internet. It is alternatively possible that the third  
13 communications linkage may be via a non-internet communications vehicle, such as  
14 a dedicated data transmission line, direct modem connection, or otherwise as is now  
15 known or hereafter becomes available in the art.

#### 16 **4.5 Customer Account Setup With Bank**

17 The novel methods according to this invention include creating a customer  
18 account with the bank having certain attributes and features as explained herein. The  
19 setup of the customer account can be accomplished in a number of different ways,



1 but includes limited communication of certain types of information relevant to the  
2 conduct of internet purchase transactions in accordance with the invention.

3 In general, the creating of a customer account involves associating the bank's  
4 customer account information with a particular customer. The customer can be an  
5 individual, association, government, corporation or other entity which is interested in  
6 conducting a purchase transaction over the internet utilizing the methods of this  
7 invention. The exact manner of associating the customer with the account can vary  
8 dependent upon the bank and how it wishes to organize the customer accounts and  
9 associated data. In one example, the customer account may be associated with a  
10 customer by using a customer identification code. The customer identification code  
11 may be an account number, account name, account alpha-numeric identifier or other  
12 means for identifying the customer in the records of the bank.

#### 13 **4.5.1 Customer-Originated Account Information**

14 The creating of a customer account involves communicating information from  
15 the customer to the bank for use in connection with the customer account. The  
16 customer account information includes customer-originated information which is  
17 communicated by the customer to the bank. Examples of customer-originated  
18 information would typically include the customer's name, home and/or business  
19 address, phone number, social security number, tax identification number and other  
20 information, such as discussed below.

1 **4.5.2 Bank-Originated Account Information**

2 The process of setting up the customer account may also include  
3 communicating customer account information from previous records of the bank. This  
4 may involve communication from one division of the bank to another division of the  
5 bank. Customer account information originating from the bank is herein termed  
6 bank-originated customer account information. The bank-originated customer  
7 account information may not need to be specially communicated and could be called  
8 upon by authorization of the customer or by policy of the bank.

9 **4.5.3 Third-Party-Originated Account Information**

10 Additionally, methods according to this invention may use customer account  
11 information provided by third parties. Exemplary third-party-originated information  
12 may include credit information from a credit reporting service or other business or  
13 credit reference. Another form of third-party-originated information may be various  
14 types of information from a government entity, public records or other publically  
15 available information.

16 **4.5.4 Communicating Customer Account Information**

17 Preferred methods according to the invention include communicating some of  
18 the customer account information to the bank, preferably with at least some of the  
19 information being communicated via one or more communications vehicles which are  
20 not over the internet. This allows the customer account information to include

1 information which comes via another mode, source or vehicle. This helps to provide  
2 additional security so that fraud cannot easily be practiced. Fraud may otherwise be  
3 possible merely by intercepting communications made via the internet, using publicly  
4 accessible files. The accessible files are then used for fraudulent schemes and can  
5 be easily perpetrated against prior technology.

6 Methods for communicating some of the customer account information may  
7 also include communicating via the internet for a portion of the customer account  
8 information. This allows simplicity in some aspects for setting up portions of the  
9 account or for providing additional information desired after the account has be set up  
10 or partially set up. Such internet communicated account information may come from  
11 any suitable source. For example, the customer may provide it's name along with a  
12 request to setup an account via the internet. Other customer account data fields may  
13 be completed via telephone using customer-originated information, which may be  
14 combined with bank-originated information and third-party-originated information, both  
15 or only one of which may be provided via the internet or using non-internet  
16 communications.

#### 17 **4.5.5 Customer Account Information Control & Maintenance**

18 The customer account information maintained by the bank, or by a service or  
19 equipment vendor maintained for the bank's use, is advantageously stored in the form  
20 of a data processing accessible database or the equivalent. The database can be

1 maintained on a bank computer or computers, or at computers or other database  
2 storage and data processing equipment maintained for the bank and which is  
3 accessible thereto. The bank's access to the customer account database is  
4 preferably via a dedicated or secure communications conduit, such as within the  
5 bank's data processing equipment or between the bank's data processing equipment  
6 and a service vendor which utilizes a secure, dedicated, encrypted and/or encoded  
7 communications link with the bank.

#### **4.5.6 Customer Account Information Field for Computer Identification**

8  
9 The customer account information with the bank, or maintained for the bank,  
10 also preferably includes a number of customer account information fields. One  
11 customer account information field preferably includes customer computer  
12 information. The customer computer information includes at least one customer  
13 computer identification code or other computer identification information which is used  
14 to associate the customer account with at least one authorized customer computer.  
15 The customer computer identification information kept by the bank is used to identify  
16 when a computer is an authorized customer computer which is set up and authorized  
17 to conduct transactions for the customer. The bank's customer computer  
18 identification information may include information for one customer computer, or a  
19 plurality of customer computers.

1 The bank's customer computer identification information may be used in  
2 connection with one authorized customer computer, or by more than one authorized  
3 customer computer. In one form of the invention a single authorized customer  
4 computer identification may be used on multiple computers; such as home, office,  
5 laptop, etc. for a single user. In another form of the invention the bank customer  
6 computer identification information may be uniquely associated with a single,  
7 particular customer computer in such a way that no other customer computer is  
8 associated with such information. This can be done by utilizing unique information  
9 which can be stored on the customer computer and is not capable of being  
10 reproduced onto another computer.

11 The associated bank data field used to specifically or uniquely identify an  
12 authorized customer computer may take various forms now known or hereafter  
13 developed. One example would be information kept by or for the bank which  
14 indicates what a file stored on the customer computer will contain when read or  
15 interrogated by the bank computer using a code key, or other decoding or deciphering  
16 means now known or hereafter developed.

17 The contents of a customer computer identification file or files may remain fixed  
18 over time. Alternatively, the computer identification information may vary with time,  
19 so as to be unique at any particular point in time. Still further, such information may  
20 change or be changeable each time or at a certain frequency or variable frequency  
21 or variable frequency when read by the bank. Such information may also, as a matter

1 of programming, change over time either by data processing which occurs on the  
2 customer computer or as a result of a process performed by the bank computer  
3 during reading or interrogation.

4 In other forms of the invention the file or files on the customer computer  
5 identification information may change as a result of some additional variable or  
6 parameter other than time. Exemplary alternatives may include parameters such as  
7 bank or customer transaction numbers, control numbers or other variables. In some  
8 forms of the invention the bank changes the customer computer identification  
9 information as each customer purchase transaction is processed or at each instance  
10 of communication between the customer and bank. The associated change in the  
11 authorized customer computer identification may not involve time as a factor but may  
12 merely depend on the number of bank-customer communications interactions.

13 The customer computer identification information is used on or with the  
14 customer computer in such a way as to provide a secure, specific, and preferably  
15 unique, identifier which can be read or otherwise identified by the bank when in  
16 communication with the customer computer. Such communication between the  
17 customer computer and the bank can be effected in a variety of suitable ways, but  
18 typically and preferably will be communication over the internet in the course of  
19 conducting a purchase or similar transaction. Alternatively, it may be more  
20 advantageous for some or all of the computer identification information to be  
21 communicated between the authorized customer computer and the bank computer

1 via direct telephone modem or other communication methodology when setting up or  
2 creating the customer account. The communications alternatives will in some forms  
3 of the invention have at least one non-internet communications vehicles.

#### 4 **4.5.7 Customer Account Information Field for Delivery Address**

5 The process of setting up or creating the customer account with the bank also  
6 preferably involves providing the customer account with customer delivery address  
7 information associating said customer account with at least one authorized customer  
8 delivery address.

9 Customer delivery address information kept by the bank computer 30 can be  
10 inclusive of a single home or business delivery address. This provides a more secure  
11 purchasing transaction because methods according to this invention include  
12 verification of the shipping or delivery address directions given to the merchant so that  
13 shipments are directed to a street address or other address which is tied to the  
14 customer. The delivery or shipping address setup information is preferably  
15 information which can be authenticated. The setup authentication preferably uses  
16 third party authentication or bank-originated information which is useful for  
17 authenticating, and further preferably uses means other than internet communicated  
18 information ostensibly from the customer computer.

19 Authentication of the shipping or delivery address can in one form be provided  
20 by having the delivery address supplied for set up in the bank customer account

1 records using a non-internet mode of communication, such as personal  
2 communication. For example, a person could appear in person at the bank and  
3 provide personal identification for setting up a portion or all of the customer account  
4 verification information. Another possibility is for the customer to provide authorized  
5 delivery addresses and other customer account information to the bank via voice  
6 phone line. Other communications vehicles for supplying setup information may  
7 alternatively be used, such as direct modem communications between the customer  
8 and bank.

9 The shipping or delivery address is a key piece of order information because  
10 without such information the internet merchant cannot provide the goods or services  
11 requested. The shipping or delivery address also may serve as customer verification  
12 and authentication information according to some of the preferred methods according  
13 to this invention. The delivery address can be used as order verification information  
14 by having the customer include the desired delivery address as part of the order file  
15 and the merchant can submit the requested delivery address to the bank for  
16 verification and confirmation during the bank's analysis determining validation of the  
17 order.

18 During the course of a purchase transaction, the delivery address can  
19 alternatively be supplied by the bank to the merchant. This may be done after the  
20 customer has selected during communication with the bank, the desired authorized



1 delivery address from a group of one or more previously set up authorized customer  
2 delivery addresses contained in the customer account records held by or for the bank.

3 To enhance security, the customer may during communication with the bank  
4 indicate the desired authorized delivery address from a set of available options and/or  
5 in a shorthand manner. For example, the customer goes through a delivery address  
6 selection process which allows the customer to only select one of the authorized  
7 customer delivery addresses set up in the bank's customer account information.

8 To further illustrate the shorthand presentation of authorized delivery  
9 addresses, the customer is placed in communication with the bank, such as  
10 diagramed in Fig. 3. The customer is then prompted to select from his or her "home  
11 address" or "office address" as queried by the bank in an on-line communications  
12 sequence. The full home or office addresses need not be communicated between the  
13 bank and customer using the internet. The customer may click upon one of the  
14 addresses indicated in shorthand. This is done as part of requesting the bank to  
15 validate and authorize the transaction. The bank is also requested to assure the  
16 merchant of payment and/or provide payment to the merchant. The bank, after  
17 successfully completing its validation analysis of the purchase transaction, sends  
18 assurance of payment to the merchant and directs that shipment must be to an  
19 authorized delivery address specified by the bank to the merchant. Alternately, the  
20 delivery address may be confirmed by the bank as supplied by the customer to the  
21 merchant.

1 The customer authorized delivery address information is preferably provided  
2 to the bank for account setup using a non-internet information source or  
3 communications vehicle, such as a voice telephone line. More preferably, the  
4 authorized customer delivery address information is provided to the bank by the  
5 customer using a caller identification telephone line which can be linked with the  
6 customer and/or authenticated as explained further below.

7 The customer may have routine address options such as home or office  
8 address. The customer may also have secondary or incidental delivery addresses to  
9 which purchased goods may be directed. For example, secondary address may be  
10 setup regularly for close family members upon request from the customer in a request  
11 which can be authenticated to the true customer.

12 Incidental addresses used by the customer, such as for gifts to friends or other  
13 people, can be handled similarly. The customer calls and submits the additional  
14 authorized delivery address using a caller identification telephone line authenticated  
15 to the customer and/or user. The bank then edits the customer record to add the  
16 additional authorized addresses. These too can be presented in shorthand during  
17 purchasing transactions using a variety of different shorthand terms picked by the  
18 user.

#### **4.5.8 Customer Account Field for Telephone Caller Identification**

The customer account with the bank may also include authorized telephone caller identification information which is associated with the customer. The telephone caller identification line information can be used to provide immediate authentication evidence if it matches with other customer account information. This may be supplemented using additional telephone company or other third party information which provides supporting authentication that the telephone line being used is associated with the customer for which the bank has an associated customer account.

The telephone caller identification information is preferably authenticated in some forms of the invention. The telephone caller identification information may be authenticated by third party authentication using the phone company or other third party.

Alternatively and more simply, the telephone caller identification information can be used directly as a verification parameter because the customer used the same telephone line when setting up the customer account with the bank. Thus the bank verifies that each purchase transaction communication between the customer and bank is via the same telephone line or one of several authorized telephone lines.

It is also possible to use one or more of the above verification techniques in combination with an additional third party authentication process. This is preferably performed such as by comparison to a credit report which includes the customer's

1 address information and telephone number. With these pieces of information, the  
2 customer telephone caller identification may match either or both the telephone line  
3 used during the customer account setup, and/or by comparison of the telephone caller  
4 identification information with third party information to perform an authentication  
5 process.

#### 6 **4.5.9 User Identification Codes**

7 Customer account set up at the bank further preferably includes another field  
8 or fields of information to define authorized users for the customer account. This is  
9 done by setting up a user personal identification number or other user identification  
10 information and coding. The user identification code may be selected by the bank,  
11 or the code may reflect the user's choice. A particular requested personal  
12 identification number or code can be numeric, alpha-numeric, alphabetical or some  
13 other code configuration.

14 The user identification code is set up, and is provided in the customer account  
15 records at the bank for the authorized user or users and the associated customer  
16 account. This personal identification information is preferably communicated using  
17 a non-internet means of communication. This is advantageously done using a secure  
18 non-internet means of communication. One suitable form of communication is via  
19 voice telephone line. Alternatively, an email communication to the user of the user's  
20 personal identification code may be employed. Email communicated over the internet

1 may be acceptable depending upon the policies and levels of security determined by  
2 the bank and customer. Other modes of communication such as telephone caller  
3 identified voice discussion, written notification, or personal communication may also  
4 be suitable in some of the methods according to this invention.

#### 5 **4.5.10 Customer Account Verification Information**

6 The customer account information kept by or for the bank includes customer  
7 account verification information. The customer account verification information may  
8 include one or more, or various selected combinations of the following types of  
9 information.

10 One verification parameter is the shipping or delivery address or addresses as  
11 discussed above. By performing a verification process using delivery address of a  
12 purchase transaction order, the bank can help assure that the purchase transaction  
13 includes goods or services which are being provided to an actual customer at it's  
14 authorized address.

15 Another verification parameter is customer computer identification information  
16 as discussed above. By performing a verification process using customer computer  
17 identification information at the bank and customer computer, the bank can help  
18 assure that the purchase transaction is being made from a computer authorized by  
19 the customer as a source for authorized purchase transactions.

1 A further verification parameter is telephone caller identification information  
2 provided on the telephone line used by the customer to communicate with the  
3 merchant, the bank, or both. By performing a telephone caller identification analysis,  
4 the bank can help assure that the purchase transaction is being placed using an  
5 authorized customer telephone line having line or caller identification.

6 An additional or alternative verification parameter is user personal identification  
7 information as discussed above. By performing a user personal identification  
8 verification analysis, the bank can help assure that the purchase transaction is being  
9 placed by an authorized user for the particular customer account being used.

10 Other types or forms of customer account information can also be used as  
11 verification information used by the bank in making one or more verification analyses  
12 as part of the bank's process in considering and determining whether a purchase  
13 transaction is properly validated or invalidated.

14 The one or more verification analyses performed by the bank in processing a  
15 purchase transaction validation request preferably employ information which is  
16 obtained from the customer computer. This is advantageously done by placing the  
17 bank computer 30 and customer computer 10 into active communication with one  
18 another. This can be most easily done using the internet as illustrated in Fig. 3. It  
19 can also be done using other alternative communications vehicles.

1 Fig. 3 shows customer computer 10 submitting a purchase transaction  
2 authorization request to the bank computer. This is preferably done directly with the  
3 bank. Alternatively, it can be done via relay by the merchant computer.

4 In the preferred versions of the invention, the bank computer 30 responds or  
5 precedes the customer authorization request with an identification inquiry. This can  
6 use one or more of the verification or authentication parameters or other identification  
7 means. In general, the larger the number of verification or authentication parameters  
8 considered by the bank in the identification inquiry, then the reliability of the inquiry  
9 tends to improve. Typically, the identification inquiry will use verification of customer  
10 account verification information. For example, the user personal identification and  
11 customer computer identification information associated with the customer account  
12 would be verified. Also, the telephone line caller identification may be used to verify  
13 the caller identification relative to caller identification information kept re the  
14 associated customer account. This can be to verify to customer account information,  
15 or additionally or alternatively in an authentication mode. Other verification  
16 parameters may also be used.

17 The bank verification analysis or analyses can be the determinative factors in  
18 leading to a bank decision whether to validate the purchase transaction. It is also  
19 possible to combine one or more verification analyses with one or more authentication  
20 analyses as indicated in this document.

1 In performing validation analyses, the bank can also employ verification or  
2 authentication of one or more verification or authentication parameters used in  
3 connection with a merchant account set up with the bank. The same or different  
4 verification or authentication parameters may be used with the merchant as are  
5 described with respect to verification and authentication of the customer and user as  
6 described herein.

#### 7 **4.5.11 Customer Account Authentication Information**

8 The customer account information kept by or for the bank preferably includes  
9 customer account authentication information. The customer account authentication  
10 information can include one or more or various selected combinations of the following  
11 types of information or their equivalents.

12 One authentication parameter is the shipping or delivery address as discussed  
13 above. By performing an authentication process determining the authenticity of one  
14 or more of the customer authorized delivery addresses, and then verifying a delivery  
15 address of a purchase order, the bank can help assure that the purchase transaction  
16 includes goods or services which are being provided to a customer at it's authorized  
17 and authenticated address.

18 Another authentication parameter is customer computer identification  
19 information as discussed above. By performing an authentication process using  
20 customer computer identification information at the bank and customer computer, the



1 bank can help assure that the purchase transaction is being made from a computer  
2 authorized by the customer as a source for authorized purchase transactions and  
3 authenticated by the bank after setup.

4 A further authentication parameter is telephone caller identification information  
5 provided on the telephone line used by the customer to communicate with the  
6 merchant, the bank, or both. By performing a telephone caller identification analysis,  
7 the bank can help assure that the purchase transaction is being placed using an  
8 authorized customer telephone caller identification telephone line by a customer  
9 authenticated to the specific telephone line by comparison with corresponding  
10 authentication information, such as from one or more third parties.

11 An additional or alternative authentication parameter is user personal  
12 identification information as discussed above. By performing a user personal  
13 identification authentication analysis, the bank can help assure that the purchase  
14 transaction is being placed by an authorized user for the customer account being  
15 used.

16 Other types or forms of customer account information can also be used as  
17 authentication information used by the bank in making one or more authentication  
18 analyses as part of the bank's process in considering and determining whether a  
19 customer account should be set up or a purchase transaction should be validated or  
20 invalidated. Authentication processes used during setup are termed setup

1 authentication, and authentication processes used during transaction validation are  
2 termed transaction authentication.

3 The one or more authentication analyses performed by the bank in processing  
4 a purchase transaction validation request preferably employ information which is  
5 obtained from the customer computer. This is advantageously done by placing the  
6 bank computer 30 and customer computer 10 into active communication with one  
7 another. This can be most easily done using the internet as illustrated in Fig. 3. It  
8 can also be done using other alternative communications vehicles.

9 Fig. 3 shows the customer computer 10 submitting an authorization request to  
10 the bank computer. This is preferably done in a linear communications relationship  
11 connecting the customer with the bank without involvement of the merchant.  
12 Alternatively, it can be done via a relay communications relationship through the  
13 merchant computer.

14 In the most preferred versions of the invention, the bank computer 30 responds  
15 to the customer validation and authorization request with an identification inquiry.  
16 This can use one or more of the validation and/or authentication parameters. The  
17 larger the number of parameters considered by the bank in the identification inquiry,  
18 then the reliability of the inquiry tends to improve.

19 The bank validation analysis or analyses can be the determinative factor or  
20 factors in leading to a bank decision whether to validate the purchase transaction. It

1 is also possible to combine one or more validation and/or authentication analyses with  
2 one or more other verification analyses as indicated elsewhere in this document.

3 In performing validation analyses, the bank can also employ verification and/or  
4 authentication of one or more parameters associated with the involved merchant.  
5 Such merchant account parameters are used in connection with a merchant account  
6 which is also set up with the bank. The same or different authentication or verification  
7 parameters may be used with the merchant as are described with respect to  
8 verification and/or authentication of the customer and user as described herein.

#### 9 4.6 Customer Account Setup At Customer Location

10 In addition to the customer account setup at the bank, there is also preferably  
11 setup at the customer location. The customer computer may be provided with  
12 programming that allows the bank to access the bank-encoded or otherwise provided  
13 customer computer identification code. A variety of known identification methods are  
14 possible. One suitable form of identification is sometimes referred to as a "cookie".  
15 The preferred cookies for the invention are selectively allowed by the customer  
16 computer to be written to the customer computer in a form which allows the bank to  
17 positively identify the customer computer. A variety of formats may be used to  
18 produce and render secure the cookie or cookies sent to the customer's computer by  
19 the bank.

1 The cookie is preferably written or encoded onto the customer computer one  
2 or more times in a communication or series of communications between the bank  
3 computer 30 and the customer computer 10. This can be accomplished by direct  
4 modem interaction over a regular telephone line or using other communications  
5 vehicles. Alternatively, the communications between the customer computer 10 and  
6 the bank computer 30 can be via the internet as illustrated in Fig. 3. The  
7 communication or communications sending the cookie, cookies or other computer  
8 identification coding is preferably encrypted to improve security, particularly with  
9 regard to setup of the customer computer for bank identification inquiries.

10 The cookie or other customer computer identification can be a single sequence  
11 or code written a single time. Alternatively, it can be a code or series of codes which  
12 are written at different times. A further alternative is that the code placed on the  
13 customer computer for identification by the bank can be written in plural sessions  
14 and/or repeatedly. A further alternative is to rewrite the computer identification in part  
15 or in whole during each transaction.

16 A still further alternative is to write identification coding each time the customer  
17 computer is used with the bank to provide a historical series that cannot be  
18 reproduced by interception of any one communication. The computer identification  
19 may be subject to processing by specific use programming written onto the user's  
20 computer, such as by the bank during setup. The programming may include a code

1 key which is static or variable, such as variable with time or with customer, bank or  
2 other transaction history.

3 The customer computer identification may also be subject to processing by the  
4 bank computer, and such may include a code key which is static or variable, such as  
5 variable with time or with customer, bank or other transaction history. Still further, the  
6 customer computer identification may be subject to combined processing by both the  
7 customer computer programming and the bank computer programming, and such  
8 may include a code key which is static or variable, such as variable with time or with  
9 customer, bank or other transaction history. A variety of customer computer  
10 identification techniques can be used as may now be known or using new technology  
11 hereafter developed.

12 It is also contemplated that the customer computer 10 will be provided with  
13 software which facilitates or is required to allow communication between the customer  
14 computer 10 and the bank computer 30 to selectively allow the customer computer  
15 identification processing steps to be performed in setting up the customer computer.  
16 Such software may also be used in conducting purchasing transactions involving the  
17 bank and customer.

18 Another feature which may be allowed is the ability for a customer to transfer  
19 cookies or other customer computer identification tools between one customer  
20 computer and another customer computer. This would only be permitted if the bank  
21 and customer programming so provides. If such is allowed, then the customer

1 computer identification tools may be communicated between the two customer  
2 computers in several different ways; such as by direct wiring, or by email from the first  
3 to the second authorized customer computer.

4 The customer computer software may also provide the customer and  
5 associated users with various account management and utility features. Account  
6 management features may include allowing the customer to perform functions such  
7 as monitoring the purchase transactions made to the customer's account and  
8 monitoring payments made by the customer to pay the bank for customer charge  
9 transactions made. The utility features may also act as the means for allowing or  
10 controlling transmission of customer computer identification information between first  
11 and second customer computers.

12 Such programming may also advantageously have other capabilities and  
13 features which allow the customer and authorized users of the customer to use the  
14 account. Although such customer computer interface software may allow some  
15 modifications and information gathering, the preferred processes according to the  
16 invention may require in some implementations that setting up or changing of key or  
17 all customer account information fields occur using specific communications vehicles  
18 or modes. For example, changing (editing, adding or deleting) of customer account  
19 information fields may only be allowed by direct, non-internet communication.  
20 Further, account information such as authorized delivery addresses, changes to  
21 personal identification codes, changing telephone caller identification information kept

1 by the bank, user personal identification or other account information may be modified  
2 only by non-internet communication. These setup or account information modification  
3 processes are preferably done using a non-internet vehicle of communications which  
4 can preferably be authenticated by the bank prior to implementing the requested  
5 information. For example, by telephone communication over a telephone line having  
6 telephone caller identification which matches and is an authorized customer phone  
7 line. Such fields may also require voice communication between authorized  
8 representatives of the customer and the bank.

#### 9 **4.7 Exemplary Setting Up of Customer Account**

10 In one form of the invention a customer may initiate setup of a customer  
11 account with the bank. This can be done in various ways. For example, a customer  
12 may telephone the bank and request that the bank set up an account according to this  
13 invention. The customer could provide some or all of the customer-originated  
14 information indicated in the description given in this document. For example, name  
15 of customer, customer billing address, customer phone number, customer social  
16 security number, customer tax identification information, customer driver's license  
17 number, customer email address, customer authorized user identification codes, and  
18 other pertinent forms and fields of customer account information may be singularly or  
19 in combination provided in one or more modes or vehicles of communication and in  
20 one or more sessions.

1 The preferred methods for setting up the customer also preferably include  
2 authenticating one or more of the fields of customer account information by an  
3 independent authentication procedure or procedures. For example, one  
4 authenticating process would be for the bank to require that the customer provide  
5 some or all fields of the customer account information via a telephone line having  
6 telephone caller identification information available that matches the customer setting  
7 up the account. This matching for authentication may require that the named  
8 telephone owner as indicated by telephone company caller identification information  
9 be the same as the information supplied by the customer.

10 Another example of independent authentication information may include  
11 alternative or additional third party information made available by credit services or  
12 other companies having credit information or serving as credit references. Examples  
13 of such authenticating analysis would be to verify that one or more of the customer-  
14 supplied data fields match independent authentication information. Information such  
15 as customer name, account billing address, home address, home telephone number,  
16 social security number and other information given by the customer in setting up the  
17 account would be compared to the authentication information. Matched information  
18 of this type which corresponds with comparable customer information provided by the  
19 credit reporting agency or other third-party source of authentication information will  
20 provide an indication of authenticity during the customer account setup procedure.



1 Some preferred setup methods according to the invention also include plural  
2 authenticating procedures. In some forms of the invention, the new customer account  
3 is further subjected to secondary authentication procedures after the bank has  
4 performed at least one initial authentication test which confirms the authenticity of the  
5 new customer account and demonstrates reliability of at least one field of customer  
6 account information which is a verification parameter. Then the bank may instruct the  
7 customer to establish a data communications linkage with the bank to allow the bank  
8 to provide computer identification information to the customer computer. Such  
9 communications sessions can also be used to load customer and user interface  
10 software which facilitates the use of the customer account by authorized users of the  
11 customer. Such interface software may also play a role in facilitating the bank's  
12 computer identification inquiry and provide on-line verification or authentication of the  
13 customer computer and authorized user during purchase transactions.

14 The setting up of the customer computer and user, and the setting up of the  
15 customer account information held by the bank may include establishing data  
16 communications between the customer and bank using at least one session where  
17 a non-internet data communications vehicle is employed. For example, the bank may  
18 during the setup process instruct the customer to establish direct modem  
19 communications with the bank to download the interface software and provide the  
20 customer computer with a bank identifiable authentication code or codes and any  
21 encryption software. The processes may require a single non-internet

1 communications session or plural sessions whereby the computer identification  
2 information provided to the customer computer may be expanded, replicated,  
3 rendered more encoded, or encrypted using a single or plural encryption techniques.

#### 4 **4.8 Customer Account Activation**

5 Preferred methods according to this invention further include activating a  
6 customer account. The customer account is most preferably activated after the bank  
7 has received some or all of the customer account information. It is also advantageous  
8 that the customer account be activated after the bank has performed at least one  
9 setup authentication process deemed appropriate by the bank according to the banks  
10 security policies. For example, receiving setup information from a new customer  
11 using a caller identification telephone line that indicates the customer is authentic may  
12 by bank policy be sufficient authentication for activation of the account. Alternatively,  
13 more fields or other fields can be used in a setup authentication analysis.

14 It is also possible that the setup authentication may proceed in a progressive  
15 manner. After an initial contact and at least one setup authentication analysis, the  
16 bank may provide limited utilization, such as a small credit limit. The credit limit may  
17 be increased after additional authentication procedures have been performed  
18 successfully. The credit limit may also be increased after additional customer  
19 utilization establishes that the account is performing validly. Such progressive

1 authentication will allow greater reliability as the customer history progresses in time  
2 or transaction number.

3       Activation may also advantageously include writing to the customer computer.  
4 The writing to the customer computer may include interface programming as  
5 discussed herein. It also typically will include writing, encoding or otherwise providing  
6 the customer computer with customer computer identification coding and  
7 programming needed.

8       In some of the preferred methods according to this invention, the activation of  
9 the customer account may also be made contingent upon successful testing. Test  
10 communications can be conducted between the customer and bank. This can be in  
11 the nature of a test communication whereby the customer goes to a special web site  
12 operated by the bank and then proceeds to conduct a test internet purchase  
13 transaction. In such test transaction the user will be prompted for entry of the user's  
14 personal identification code. The user's actual name may be supplied as added  
15 verification but is not believed necessary since the customer's computer has been  
16 provided with bank accessible customer computer identification information. This can  
17 be assessed either before or after the user is prompted for the user's personal  
18 identification code.

19       In one optional form of the invention, the customer account setup and activation  
20 is abbreviated to facilitate immediate limited use of the account and this is further  
21 detailed hereinbelow in a separate section of this document.

#### 4.9 Merchant Account With Bank

Methods according to preferred forms of the invention may also include setting up a merchant account with the bank. This is advantageous to further reduce the risk of fraud and to facilitate and speed payment to the merchant. It is also desirable in establishing a legal foundation between the bank and merchant whereby the merchant is prepared and willing to accept assurance of payment from the bank as contrasted with actual payment or funds transfer. The processing of internet purchase transactions will be facilitated by prior setup of the merchant with the bank.

The process of setting up the merchant with the bank can vary significantly depending on policies of the bank and can vary with time to improve or modify processing and transaction of the internet purchases. The merchant can be set up using some or all of the same procedures described above in connection with preferred processes for setting up customers. Some modifications, additions and/or abbreviations may be in order depending upon the policies of the bank and the desired level of security relative to convenience.

One possible abbreviation which may be as acceptable is to not employ third-party transaction authentication of the merchant computer for reasons of processing speed or economy. If the bank has a merchant account set up with various fields of data and since the merchant is primarily looking to get paid, then it may be sufficient that the merchant receives assurance of payment and/or payment

1 without the bank performing authentication of the merchant computer involved in the  
2 purchase transaction.

3         Authenticating and/or verifying the identification of the merchant computer is  
4 preferred in other implementations of the invention. For example, in some of the  
5 preferred methods the customer establishes communications with the merchant and  
6 then indicates to the merchant that payment will be assured and/or made by the  
7 bank. Since the merchant is looking for payment assurance, it may be to the  
8 increased satisfaction of the merchant for the merchant to establish the third  
9 communications link directly with the bank. This approach may improve the  
10 confidence that the party contacted by the merchant in seeking transaction  
11 authorization is in fact the bank. The bank then may perform an authentication  
12 process similar, the same, or employing one or more of the processes, aspects and  
13 features described hereinabove in connection with the bank identifying, verifying or  
14 authenticating the customer. Accordingly, any, all or various combinations of  
15 authentication procedures and features may be used by the bank, including those  
16 used to authenticate the merchant's computer.

17         Alternatively, the bank may choose to more simply verify the merchant  
18 computer identification with merchant account verification information kept by the  
19 bank. This can be done without performing additional authentication analysis, or  
20 authentication analyses which utilizes third party information or other independent  
21 authenticating information.

1 The description given hereinabove concerning the bank and customer  
2 relationship thus is applied by reference to describe the possible use of some or all  
3 of the authentication procedures and/or various verification procedures described in  
4 connection with the customer account for use in considering the setup of the  
5 merchant and whether a transaction being analyzed by the bank should be validated  
6 and payment assured to the merchant.

7 It should also be understood that some forms of this invention may include  
8 internet purchase transactions where the merchant has not been previously set up  
9 with a merchant account with the bank. In such situations it may be desirable to set  
10 up the merchant during the course of the purchase transaction. This setup option  
11 during the course of the transaction may be either a partial setup or a complete setup  
12 depending upon the bank's policies and desire for security in validating and paying  
13 for internet purchases.

14 In other forms of the invention the merchant may not in a practical manner be  
15 set up at all since the procedures may simply involve transfer or delivery of funds  
16 automatically after or at the time the transaction is validated and authorized by the  
17 bank. For example, the bank and merchant may be in communication and the  
18 merchant instructs payment to be sent by check to a stipulated address at which the  
19 merchant receives payments. Electronic transfer of funds may similarly be directed  
20 as the merchant and bank find acceptable. Other payment options are also  
21 potentially acceptable.

#### **4.10 Merchant Account Setup at Merchant Location**

Depending on the degree of security desired, the setting up of the merchant account at the merchant computer may employ actions by the merchant and/or bank similar to those described hereinabove with regard to setup of the customer account upon the customer's computer. Analogous or the same procedures may be used at or upon the merchant computer 20. Such description shall be applied by reference without being reiterated at this point in this document.

In some respects the setting up of the merchant computer may be tailored more specifically to the needs of the bank and merchant. For example, the merchant may be provided with merchant computer identification or not. This in turn may allow simplified software to be used on the merchant computer to speed order processing or provide other enhanced abilities or features. One or more of the above-explained customer setup techniques may be applied alone or in combinations for the setup of a merchant.

#### **4.11 Merchant Account Activation**

The explanations provided above with regard to setting up and activating a customer account may also be employed in part or in whole with regard to activation of a merchant account. The description given herein is applied by reference to merchant account activation as described above to provide preferred forms of the invention.

1 The merchant account setup process and activation process may also be  
2 abbreviated or eliminated. For example, the merchant could be informed that it is not  
3 yet fully set up, but that a one-time transaction account is being established in the  
4 merchant's name at the bank. The merchant can obtain payment as the merchant  
5 subsequently instructs the bank.

6 Alternatively, the bank could assure payment and communicate that payment  
7 in a desired form is being made to the merchant, for example, the assurance of  
8 payment may be communicated by the bank to the merchant along with an indication  
9 that the bank is sending payment. Such payment can be by check, electronic funds  
10 transfer or other suitable means. Payment by effected bank check payable to the  
11 order of the merchant illustrates that merchant account setup would not be an  
12 absolute requirement, although such is preferred under this invention.

13 In the most preferred forms of this invention the merchant would preferably be  
14 paid after the bank performs at least a minimal amount of merchant account setup  
15 and either or both verification and/or authentication of the merchant during both setup  
16 and in processing purchase transactions. This can be done analogous to the  
17 discussion given herein with regard to initial use by a new customer.

#### 18 **4.12 Order File Creation**

19 Preferred methods according to this invention include order file creation. The  
20 customer is principally involved in creating the order file. Key or principal aspects of



1 the order file include: a) specifying the goods or services, or both, which the customer  
2 seeks to obtain using the merchant; and, b) specifying the delivery or shipping  
3 address to which the goods are to be shipped or delivered, or at which the requested  
4 services are to be performed.

5 The order file will typically be assembled using ordering software which the  
6 merchant provides or makes available at the merchant's web site. Since  
7 conventional merchant order taking software requires a preliminary assessment of  
8 means for payment, this indicates the appropriateness of implementing modified  
9 order software when orders are to be paid using the bank and methods according to  
10 this invention. Preferably the modifications direct the order taking software into  
11 ancillary programming which is associated with the assurance of payment and  
12 payment processes described herein according to this invention.

13 Under some of the methods according to this invention, the customer accesses  
14 the merchant web site and then builds the order file by specifying the goods and  
15 services. The order file may also include the customer's name, although such is not  
16 strictly necessary. The essential fields in the order file are the goods and/or services  
17 and delivery address information. The merchant may elect to require more  
18 information, and typically the customer name or some other customer identifier will  
19 be used to increase reliability of the ordering process. Also desirable is telephone or  
20 email contact information for the customer and user representing the customer.

1 It is also typically desirable for the order file to define the costs associated with  
2 the order. This is provided so that the customer may consent to the amount of  
3 charges being incurred by the customer, and the amount to be assured and paid by  
4 the bank.

5 Many additional fields of information may be included in the order file as  
6 desired by the merchant or bank, and in compliance with any agreement entered into  
7 between the merchant and bank.

8 In preferred methods according to this invention, the order file used in  
9 placement of the customer order with the merchant does not include a customer  
10 account number, numbers or codes which is or are separately useful to apply charges  
11 to the account. This is eliminated to reduce the risk of internet fraud or other misuse  
12 of the customer account with the bank. Instead, the customer builds the order file in  
13 part or in total and specifies that payment will be assured and made by the bank.  
14 This is preferably implemented using a displayed icon on the merchant's web site  
15 which allows the customer to at some point in the process of building the order file,  
16 or after it is complete, to indicate the use of the bank as the means for payment.

17 Where a merchant is previously set up with the bank, then the election by the  
18 customer to use the bank for payment may advantageously cause the merchant's  
19 order file building program to enter into a programming routine or sub-routine that  
20 does not require an account number to be communicated. Other information may  
21 also be omitted to minimize the risk of interception and/or fraud.

1 In some forms of the invention, the order may be assembled by a customer  
2 with merely the ordered items specified, the identity of the merchant, and a  
3 transaction identification or control number. Alternatively, merely with the ordered  
4 items and customer's name or other customer identification. The customer may  
5 either provide a delivery address in the order file, or this information can be omitted  
6 from the customer's order file and supplied solely by the bank. Alternatively, the  
7 order file can include a customer's specification of the delivery address and this  
8 information can be relayed by the merchant to the bank for verification. The bank can  
9 then verify that the delivery address is an authorized delivery address for the  
10 customer involved prior to validating the order.

11 In another form of the invention, the customer builds the order file with the  
12 delivery address being provided to the merchant. The customer establishes  
13 independent communication with the bank seeking authorization of the purchase  
14 transaction. Then the customer is required to specify the desired delivery address  
15 to the bank. This can be done in response to an inquiry by the bank computer. It can  
16 also be done using a shorthand listing of authorized delivery addresses so that the  
17 customer and bank do not therebetween communicate the delivery address in  
18 sufficiently complete form to allow interception.

19 The order file may alternatively be built in one or more order file building  
20 sessions involving one or more communications linkages via the internet between the

customer and merchant. The order file may be saved and then retrieved for later editing and placement of the order.

#### **4.13 Communicating Between the Customer and Merchant**

In methods according to the invention the customer establishes communication via the internet with the merchant. The mode of communication via the internet may use any acceptable protocol or security precautions now known or hereafter developed. The mode of communication can be encrypted or use other secure network procedures. A variety of communications options arise and are possible because the customer is advantageously not transmitting sensitive information, such as the account number and expiration date coupled with account name.

In alternative forms of the invention, the customer may initiate the purchase transaction by contacting the bank and providing an indication that an order is planned. Thereafter, the merchant may be contacted. This can occur directly between the customer and merchant, or using the bank as an intermediary.

#### **4.14 Order Placement**

Methods according to this invention also include placement of the customer's order with the merchant. This is most frequently done by communications linkage between the customer and merchant computers, such as illustrated in Fig. 3. The placing of the order will typically occur shortly after the customer has assembled the

1 requisite information in the order file as required by the merchant. This may be  
2 modified for orders being paid by the bank in accordance with this invention.

3 Placement of the order will preferably entail specification by the customer that  
4 the means of payment is via the bank. The merchant therefore looks to the bank for  
5 assurance of payment and/or payment.

6 In alternative forms of the invention, the customer may contact the bank and  
7 build the order file and/or place the order via the bank's computer. The bank can  
8 then assure payment to the merchant in the same or a separate communication from  
9 the communication including placing or confirming the customer order.

10 In either of the above alternatives, the customer account number is not  
11 communicated to the merchant. Also in such alternatives, the customer's  
12 communication with the bank does not require providing information which is  
13 sufficient to allow an intercepting party to place orders which charge against the  
14 customer's account. This should be contrasted to the current practices explained  
15 above which provide such information and require it to be relayed, usually multiple  
16 times.

#### 17 **4.15 Communicating Between Customer and Bank**

18 Preferred methods according to the invention also include communicating  
19 between the customer and bank whereby the customer submits a request for bank  
20 authorization, and for the bank to assure payment and/or make payment to the

1 merchant. Fig. 3 illustrates an internet communications linkage between the  
2 customer computer 10 and the bank computer 30. This is done via customer internet  
3 service 12, internet 15 and the bank internet service 28.

4 In alternative systems and methods the customer computer 10 may be directly  
5 connected via modem (not illustrated) to the bank computer 30. Other  
6 communications vehicles and various communications routes can be employed to  
7 provide data communications between the customer and bank.

8 In some of the methods according to this invention the customer communicates  
9 with the bank in non-internet forms of communication. This includes the direct  
10 modem connection explained above. It is also possible to employ direct, in person  
11 communications between a customer and a representative of the bank. Further it is  
12 possible to use telephone voice lines, fax communication or other non-internet  
13 communications vehicles. This is particularly advantageous in the setup phase, but  
14 also can apply to editing or other changes to the setup information.

15 It may also be desirable to use non-internet forms of communication between  
16 the customer and bank in the course of a purchase transaction. The customer or  
17 bank can initiate the communication, which is preferably a data processing  
18 communications vehicle. Data concerning the proposed order and other data passed  
19 between the customer and bank are communicated to perform the methods  
20 according to this invention.

1 **4.15.1 Initiation**

2 The communications linkage between the customer and bank computers can  
3 result from customer initiation or bank initiation. This can be done either before or  
4 after the order file is created and/or placed. In one preferred version of the invention,  
5 the user representing a customer first builds an order file at the merchant's web site.  
6 Then the customer indicates while in communication with the merchant via the  
7 internet, that the customer wishes to pay using the bank. This is easily provided by  
8 having an internet link between the merchant's web site and the bank computer 30.  
9 This can be part of the merchant setup with the bank.

10 The selection of the bank using the merchant web site link or other suitable  
11 means initiates a data communications linkage between the customer and bank.  
12 This is preferably a direct connection between the customer and bank.

13 In alternative methods according to the invention, the customer may indicate  
14 while at the merchant web site that the customer wants to pay using the bank.  
15 Instead of the customer initiating the communications linkage with the bank, the  
16 customer's placement of the order with the merchant can result in a communication  
17 between the merchant and bank. The merchant communicates with the bank and  
18 indicates that the customer has placed an order that includes a request that the bank  
19 is to be used to assure payment and/or make payment for the customer order. The  
20 merchant can communicate relevant information to the bank indicating the transaction

1 control number, customer identification, and amount of charges associated with the  
2 order.

3 In response to the merchant's communication with the bank, the bank initiates  
4 a communications linkage with the customer. The customer computer 10 can be  
5 contacted via the internet or by other data processing communications vehicles.

6 The merchant information supplied to the bank concerning the customer order  
7 includes transaction identification which is also provided to the customer computer.  
8 When the bank computer establishes communication with the customer computer,  
9 then the bank goes through an identification inquiry and verification and/or  
10 authentication processes to determine that the bank has contacted the proper  
11 customer user and proper customer computer which is authorized to be involved in  
12 the identified transaction with the merchant.

#### 13 **4.15.2 Bank Identification Inquiry**

14 After communication has been established between the bank and customer,  
15 the bank performs a bank identification inquiry. The inquiring action may involve a  
16 number of different identification procedures. These identification procedures may  
17 be the same as described above using verification of customer account information  
18 and/or authentication of the customer computer and user using one or more of the  
19 indicated analyses.



1 A preferred identification inquiry performed by the bank relative to the customer  
2 utilizes the customer computer identification setup on the customer computer. The  
3 bank computer performs an identification inquiry which is preferably in an encoded  
4 form. The customer computer must provide a satisfactory response identifying the  
5 customer computer to the bank computer. If proper identification is not achieved then  
6 the communications session is terminated.

7 If proper identification of the customer computer is achieved, then the bank  
8 further analyzes to determine whether the personal identification information given  
9 by the customer computer user is an authorized user. This is done by verifying that  
10 the personal identification code given by the user is an authorized user personal  
11 identification code. It can alternatively or additionally employ other inquiries using  
12 other fields of customer and user information for verification or authentication.

13 The above identification analyses are used to properly associate in the banks  
14 records, the customer account and user for further processing of the communication  
15 and associated payment authorization request. The above-described identification  
16 procedures may also act as a portion of the verification analyses used in performing  
17 validity analyses, or as part of one or more authentication analyses, which may  
18 include just these considerations or may be combined with additional analyses to  
19 provide additional reliability for the authentication analysis and validation decision.  
20 The additional parameters may be any of those described elsewhere herein in

1 connection with verification or authentication of the setup of the customer account  
2 and processing of the purchase authorization request, or other similar parameters.

### 3 **4.15.3 Bank Authentication Inquiry**

4 The communications between the customer and bank may also  
5 advantageously include an authentication inquiry by the bank to reliably determine  
6 whether the customer computer 10 is an authorized customer computer and that the  
7 user is an authorized user for such customer account. The authentication procedures  
8 explained above can also be applied during setup or a purchasing transaction  
9 validation analysis according to the invention.

10 The authentication procedures seek to determine that the customer computer  
11 and user are an authorized customer computer and an authorized user for the  
12 customer account. The authenticity analysis can use third party information as part  
13 of the authenticity analysis, or the authentication can entail only verification by  
14 matching one or more fields of customer account information.

### 15 **4.16 Communicating Between Bank and Merchant**

16 Preferred methods according to the invention may also include communicating  
17 between the bank and merchant. In such communications the merchant is seeking  
18 assurance of payment from the bank, so that the customer order can be fully  
19 processed. The customer or merchant may submit a request seeking bank  
20 authorization, and for the bank to assure payment and/or make payment to the

1 merchant. Fig. 3 illustrates an internet communications linkage between the  
2 merchant computer 20 and the bank computer 30. This is done via merchant internet  
3 service 18, internet 15 and the bank internet service 28.

4 In alternative systems and methods the merchant computer 10 may be directly  
5 connected via modem (not illustrated) to the bank computer 30. Other  
6 communications vehicles and various communications routes can be employed to  
7 provide data communications between the merchant and bank.

8 In some of the methods according to this invention the merchant may  
9 communicate with the bank using non-internet forms of communication. This  
10 includes the direct modem connection explained above. It is also possible to employ  
11 other direct communications between a merchant and the bank or a representative  
12 of the bank. Furthermore, it is possible to use telephone voice lines, fax  
13 communication or other non-internet communications vehicles. This is particularly  
14 advantageous in the setup phase, but also can apply to editing of setup information.

15 In most purchase transaction processing the merchant and bank will  
16 communicate via the internet. It may alternatively be desirable to use non-internet  
17 forms of communication between the merchant and bank in the course of a purchase  
18 transaction. The customer or bank can initiate the communication, which is  
19 preferably a data processing communications vehicle. Data concerning the proposed  
20 order and other data passed between the bank and merchant are communicated to  
21 perform the methods according to this invention.

1 **4.16.1 Merchant-Bank Communications Initiation**

2 The communications linkage between the merchant and bank computers can  
3 result from merchant initiation or bank initiation. This can be done either before or  
4 after the order file is created and/or placed. In one preferred version of the invention,  
5 the user representing a customer first builds an order file at the merchant's web site.  
6 Then the customer indicates while in communication with the merchant via the  
7 internet, that the customer wishes to pay using the bank. This is easily provided by  
8 having an internet link between the merchant's web site and the bank computer 30.  
9 This can be part of the merchant setup with the bank.

10 The selection of the bank using the merchant web site link or other suitable  
11 means initiates a data communications linkage between the customer and bank.  
12 This is preferably a direct connection between the customer and bank. Invitation of  
13 merchant bank communications may vary dependent upon the chosen  
14 communications approach between the customer and merchant.

15 In alternative methods according to the invention, the customer may indicate  
16 while at the merchant web site that the customer wants to pay using bank. Instead  
17 of the customer initiating the communications linkage with the bank, the customer's  
18 placement of the order with the merchant can result in communications being initiated  
19 between the merchant and bank. In one such procedure, The merchant  
20 communicates with the bank and indicates that the customer has placed an order that

1 includes a request that bank is to be used to assure payment and/or make payment  
2 for the customer order. The merchant can communicate relevant information to the  
3 bank indicating the transaction control number, customer identification, amount of  
4 charges associated with the order, ordered goods or services or other information.

5 In response to the merchant's communication with the bank, the bank  
6 preferably initiates a communications linkage with the customer. The customer  
7 computer 10 can be contacted via the internet or by other data processing  
8 communications vehicles.

9 The merchant information supplied to the bank concerning the customer order  
10 includes transaction identification which is also provided to the customer computer.  
11 When the bank computer establishes communication with the customer computer,  
12 then the bank goes through an identification inquiry and verification and/or  
13 authentication processes to determine that the bank has contacted the proper  
14 customer and proper customer computer which is involved in the identified  
15 transaction with the merchant.

#### 16 **4.16.2 Bank Identification Inquiry of Merchant**

17 A bank identification inquiry also is preferably used when the bank and  
18 merchant computers are in communication. This can be accomplished in the same  
19 manner as described with respect to the bank identification inquiry for  
20 communications with the customer.

1 **4.16.3 Bank Authentication Inquiry of Merchant**

2 A bank authentication inquiry may also be used when the bank and merchant  
3 computers are in communication. This can be accomplished in the same manner as  
4 described with respect to the bank authentication inquiry for communications with the  
5 customer.

6 **4.17 Other Analyses by Bank for Validation of Transaction**

7 In addition to the analyses mentioned above with regard to identification,  
8 verification or authentication, it is also preferable that the bank perform one or more  
9 supplemental validation analyses. Examples of such supplemental transaction  
10 validation analyses include analyzing the available credit or available funds in the  
11 credit or debit account to be charged.

12 An additional area of analysis which can be employed is transaction frequency  
13 analysis. This type of analysis looks at the frequency of a customer's use and  
14 compares it with a predetermined range or the historical frequency of use. The  
15 historical frequency can be determined over any desired prior period or periods of use  
16 of the customer account. If the frequency of use is abnormal, then validation may be  
17 refused pending further investigation to determine if the transaction for which  
18 authorization is being sought is genuine or as a result of fraud or other abusive action  
19 by unauthorized users or customer impostors.

1 Another supplemental validation analysis is dollar amount of transaction. This  
2 analysis can look at the dollar value of a particular transaction to help determine  
3 abusive situations. For example, a set monetary amount can be used for a particular  
4 customer account as a trigger to invalidating the purchase transaction. Alternatively,  
5 the monetary trigger may be based on historical data associated with a customer  
6 account or user. The historical data can be compiled over any desired period of time.

7 Determination of validity may employ a weak link conditional approach wherein  
8 certain factors are necessarily at or above a triggering limit, or within an acceptable  
9 range. If such is not found then the ruling by the bank is invalidity and the transaction  
10 is not authorized. It is also possible to use weighted factor analysis wherein one or  
11 more of the factors used to determine validity may be scaled relative to one or more  
12 other factors using fixed, predetermined or variable weight scaling factors.

#### 13 **4.18 Validation and Authorization of Transaction**

14 The bank receives a request for authorization to charge a customer account  
15 in connection with an internet purchase transaction. The request for authorization  
16 also serves as a request that the bank perform a validation analysis which is the  
17 basis of the decision whether to authorize the transaction and communicate  
18 assurance of payment to the merchant to the benefit of the customer account being  
19 charged.

1 The request for authorization and validation can be communicated by either the  
2 merchant or customer to the direction of the bank. This can be done in a variety of  
3 suitable ways; however, communication via the internet is contemplated to be the  
4 most expedient.

5 The validation analysis performed by the bank can include one or more of the  
6 various analyses which have been described herein. Validation analysis by the bank  
7 can also include additional analyses which the bank deems appropriate in  
8 determining whether the proposed internet purchase transaction will be completed  
9 using the bank as a payment assurer and payment agent in favor of the assured,  
10 merchant.

11 The validation analysis may include analysis of the merchant, analysis of the  
12 customer, analysis of the user, analysis of third party information, and analysis of  
13 historical or other customer account information. Other analyses can also be  
14 included.

15 The validation analysis results in either validation of the transaction,  
16 invalidation of the transaction; or some other response indicating need for additional  
17 analysis or added information.

#### 18 **4.19 Communication of Assurance of Payment**

19 If the validation analysis or additional authorization analyses performed by the  
20 bank result in a positive or valid result, then the bank communicates with the



1 merchant and provides assurance of payment. Assurance of payment can be in  
2 various forms and formats. Acceptance of the assurance is facilitated by having the  
3 merchant set up with the bank as a participating merchant. In some forms the  
4 assurance of payment is communicated by the bank to the merchant via the internet.  
5 This can most effectively be accomplished by merely including the transaction control  
6 number, the amount authorized and an indication that the merchant's account with  
7 the bank will be credited in due course for the authorized amount.

8 It is also possible to send the authorization notice and assurance of payment  
9 to the merchant along with key information which has been verified. This may be  
10 transaction purchase amount, confirmation of the goods or services, and/or delivery  
11 address information which has been verified against authorized delivery addresses  
12 for the customer account involved. The bank may make payment contingent upon  
13 or subject to revocation, if the merchant ships in a manner which is inconsistent with  
14 the key information provided in the bank assurance of payment, or in a separate  
15 communication of bank authorization. In such later case the assurance of payment  
16 may be made in a separate communication between the bank and merchant.

#### 17 **4.20 Shipment or Delivery**

18 One key piece of transaction information which can be used in the bank  
19 transaction authorization or assurance of payment is the delivery address. The  
20 delivery address may be specified by the bank and shipment to any different address

1 may result in refusal to pay or revocation of payment. The merchant is obligated in  
2 such forms of the invention to follow the bank instructions containing a delivery  
3 authorization address communicated by the bank to the merchant. This delivery  
4 authorization address may be the only address provided, or it may be a confirmation  
5 of an address provided by the customer in building the order file. Still further, it is  
6 possible for the order file to be built by contributions from both the customer and bank  
7 with the bank supplying key information, such as the delivery address using an  
8 authorized delivery address set up with the bank for the proper customer account and  
9 user.

10 A further alternative is that the merchant submits the planned delivery address  
11 with the request for authorization and the bank confirms after verification against the  
12 customer account that shipment to the address indicated in the request for  
13 authorization is an authorized delivery address to which the merchant may direct  
14 shipment.

#### 15 **4.21 Payment by Bank to Merchant**

16 Payment by the bank to the merchant is most efficiently effected by crediting  
17 a previously set up merchant account with the bank. Alternatively, the bank can  
18 effect payment by sending checks, wire transfers, electronic funds transfers, or other  
19 known or hereafter developed methods of payment. The payment is preferably made  
20 concurrent with or after debiting the customer account to which the purchase

1 transaction charges are to be made. Alternatively, the bank may effect payment and  
2 then charge the customer.

#### 3 **4.22 Billing or Charging of Customer**

4 The customer is billed in a suitable fashion for the charges which are  
5 associated with the customer's internet purchase transactions. In the case of a credit  
6 account, the charge will be posted to the customer's account and then demand for  
7 payment is made by the bank to the customer. This can be done in a variety of ways,  
8 such as by billing the customer for the charges using a printed bill format.

9 Alternatively, the customer may have an account which is prepaid and has  
10 funds available for debiting to cover the purchase transaction charges. These funds  
11 can then be credited to the account of the merchant, either directly or using one or  
12 more intermediaries, such as the bank.

13 It is also possible that the customer may be charged and that payment is  
14 effected by the customer to the bank using another institution or payment agent which  
15 is billed using paper or electronic documentation. The payment agent then pays in  
16 behalf of the customer and the arrangements between the agent and customer may  
17 be accounts of various types and requirements.

#### **4.23 Further Explanation of Methods According to the Invention**

Fig. 4 further details actions taken by the customer, merchant and bank using a preferred process and preferred configuration, such as the configuration of Fig. 3. Step 110 illustrates the customer accessing the merchant internet site for purposes of gaining information, building an order file, and/or placing an order.

Step 120 is the customer building an order file in preparation for placing an order. The order file being built by the customer may identify the customer or it may be identified solely by an order tracking number assigned by the merchant. The order file also includes identification of the items which the customer wishes to obtain. Additionally, the order file may indicate that the customer has selected to have payment provided by bank 30. However, no account number, account address, or other sensitive information is required to build the order file using the novel methods. Instead, the customer order is identified by the merchant and the desired goods and services are identified in the order file. Depending upon the specific embodiment of the invention employed, other information may be included in the order file.

Step 130 represents the customer placing the order with the merchant. The merchant can perform any desired initial processing (not illustrated), such as to determine if the order is sufficiently defined and/or complete. The set of order information fields required may indicate that the customer intends to pay using bank 30.

1 Step 140 represents the customer contacting the bank. This can be done via  
2 the internet or otherwise as explained herein. Upon customer communication with  
3 the bank, the customer submits to the bank identification inquiry in step 150. The  
4 bank then analyzes the customer for authenticity using one or more of the  
5 authentication or verification procedures explained herein.

6 Fig. 4 also shows that the bank may in step 170 additionally analyze the  
7 transaction relative to the customer account for a monetary limit. Other additional  
8 analyses as explained herein may also be performed prior to validating or invalidating  
9 the purchase transaction and responding to the request for authorization.

10 In the case where the transaction is validated, then step 180 illustrates that in  
11 response to the request for authorization, the bank contacts the merchant and  
12 assures payment. The bank may provide delivery or shipping instructions, or confirm  
13 instructions already given by the customer, when the bank is assuring the merchant  
14 of payment.

15 Thereafter the bank sends payment to the merchant and bills the customer for  
16 the charges made in the transaction. A transaction processing fee may be charged  
17 to either or both the merchant and/or customer.

#### 18 **4.24 Fig. 5 - Illustration of Established Customer Transaction**

19 Fig. 5 illustrates a method according to the inventions. The customer computer  
20 monitor is shown as monitor 200. Displayed information is included on the monitor

1 as shown. This advantageously includes screen order file data representatively  
2 shown as order data 201. Order data 201 is used and forms part or all of the order  
3 file for this order.

4 After the order data 201 has been selected by the customer, then the  
5 operational command icons for save 202 and place order 203 are displayed to allow  
6 the user to save the order file for later editing or submission. If the user is satisfied  
7 with the order data and wants to place the order, then the order placement icon 203  
8 is clicked or otherwise operated to place the order with the merchant or bank.

9 The display on monitor 200 also shows 2 traditional charge account options  
10 labeled as operational icons 205 and 206. A user may click upon either of these to  
11 choose a prior art purchasing process such as described above.

12 Alternatively, the user is given the option of clicking on the Bank Icon 208  
13 which activates one of several different processes according to this invention.

14 Fig.5 shows a displayed message 210 indicating that the customer is an  
15 approved purchaser. The identification inquiry or inquiries explained elsewhere  
16 herein are being performed. The computer identification is conveniently referred to  
17 as an electronic thumbprint. If this authentication of the customer computer is  
18 successfully completed, then the display indicates that the order approval process  
19 automatically starts.

1 Display message 220 indicates that the computer identification inquiry was  
2 successfully completed. Now the displayed message prompts the user to enter the  
3 personal identification code associated with this user and customer account. The  
4 user then provides the code in the squares or in another suitable manner. Entering  
5 this information on the customer/user computer starts the process again and the  
6 personal identification process is undertaken. This is advantageously done by  
7 verifying the personal identification code field of the bank's customer record against  
8 the entered information.

9 Message display 230 indicates success in the prior step and the user is now  
10 being prompted to indicate whether the order is to be shipped to the user's home or  
11 business address. After the desired address is indicated, such as by clicking on  
12 screen, then the submit order command is activated and the validation and  
13 authorization procedures explained herein can be performed in various manners as  
14 described. The displayed message 240 indicates the order has been approved. The  
15 user has thus completed the interactive portion with his or her customer computer.

#### 16 **4.25 Figs. 6 & 7 - Illustration of New Customer Transaction**

17 Fig. 6 shows another monitor 250 having a customer/user computer screen  
18 display similar to that described above with regard to monitor 200. After providing the  
19 needed order data, the user clicks on the Bank Icon 208 to start interaction with the  
20 bank. The bank seeks to find computer identification information from the user's

1 computer but is unsuccessful and thus screen display 260 is presented. Displayed  
2 message 260 welcomes the potential new customer and queries the user whether he  
3 or she wants to open a new account with the bank. The user clicks on the "yes"  
4 operation control icon 261.

5 A subsequent screen display message 270 is presented in reaction to the yes  
6 command. The user is prompted to contact the bank using a specified voice  
7 telephone line. This is done to setup the customer account as variously described  
8 herein. The user/customer then performs such a setup procedure. As illustrated in  
9 representative display screen message 280, the user/customer provides the indicated  
10 information by voice explanation. The customer also agrees to the account terms  
11 and conditions. The user is also advantageously provided with the personal  
12 identification code or codes needed during this setup telephone session.

13 Fig. 7 shows a further screen display message 300. This message is displayed  
14 after the user contacts the bank or merchant web site to complete setup of the  
15 customer account by activating the account. Message 300 indicates the various  
16 verification and authentication processes have been performed and setup has been  
17 approved. An alternative rejection (non-approval) display message is shown is  
18 display message 310.

19 The displayed message 300 may also show the credit limit assigned by the  
20 bank. If the user want to proceed with account activation, then the "activate account"  
21 screen icon is clicked. In the procedure illustrated by Figs. 6 and 7, the user has



1 been given a personal identification code by telephone during the customer-bank  
2 setup telephone session. The user/customer then provides the requested number.

3 The user/customer then indicates that the activation process, as described  
4 herein, should be performed when the "activate account" icon is clicked by the user  
5 using the customer computer.

6 Message 330 indicates that the activation process preferably includes  
7 providing the customer computer with computer identification coding and  
8 programming as needed to act as an electronic thumbprint which can be read or  
9 otherwise decoded by the bank computer to verify or authenticate the computer in  
10 further transaction processing or account modification operations. This step can also  
11 be used to provide any needed customer interface programming.

12 Display message 340 indicates that the acceptance of the computer  
13 identification coding by the customer computer leads to a welcome message  
14 indicating that the customer account is activated. If the customer computer does not  
15 accept the coding and/or programming, then additional instructions (not shown) can  
16 be given.

17 Upon approval and activation of the customer account, the customer is then  
18 given an opportunity to continue with the initial order. The "yes" icon is clicked as  
19 screen display 370 indicates. A yes command leads to step 360 which prompts the  
20 user for the desired customer shipping address.

1 Screen display message 350 indicates that the order has been approved by  
2 the bank and is being further processed. Such further processing leads to the  
3 merchant also receiving approval according to the various methods described herein.

#### 4 **4.26 Example A**

5 This is one example of how the methods according to this invention can be  
6 carried out. In this example the customer and the merchant are already set up with  
7 the bank in accordance herewith. The customer contacts the merchant via the  
8 internet as described. The customer initiates communications with the merchant  
9 using a first communications link. The customer then builds the order file but does  
10 not include customer account information which is sufficient for obtaining payment,  
11 goods or services in a fraudulent transaction. Instead, the customer clicks on the  
12 bank icon set up on the merchant's web site and this links to the bank web site  
13 establishing an additional or second communications linkage therewith,  
14 advantageously using a distinct communications mode or vehicle.

15 The bank then performs a customer identity check such as by using bank  
16 encoded information written onto the customer computer. The bank analyzes the  
17 customer identity information and verifies that it is an active account. The user is  
18 prompted for his personal identification code and the user supplies such information.  
19 The bank verifies that the personal identification code is correct as an authorized user  
20 under the customer's account. If these factors are verified, then this serves as an

1 authentication process indicating the authenticity of the user to use the particular  
2 customer account and authorized customer computer involved.

3 Further third party authentication is optionally provided by the bank performing  
4 an assessment of the caller identification information associated with the telephone  
5 line through which the customer is connected to the internet in the customer-bank  
6 communications linkage. The telephone line number information is verified against  
7 the related information contained in the bank's customer account information. If the  
8 caller identification information is verified, then additional authentication evidence is  
9 provided and the bank now completes the authentication analysis.

10 The customer computer then communicates to the bank computer information  
11 indicating the merchant being used in the purchase transaction. The amount to be  
12 charged to the customer for the goods and/or services are communicated to the  
13 bank. The bank then does a credit limit analysis for the customer account, and the  
14 amount requested for authorization may or may not be found acceptable.

15 The bank then establishes a third communications link with the merchant via  
16 the internet while the customer is in active or standby communication with the  
17 merchant. The bank performs any desired merchant identification inquiry, such as  
18 done with the customer. The bank also performs an authentication analysis by  
19 verifying that the merchant computer is an authorized merchant computer using the  
20 bank's merchant account verification information.

1 With the above steps performed the bank is now in a position to perform a  
2 validation analysis for the transaction. Since the merchant, customer and user  
3 identifications have been verified and the credit limit analysis has successfully been  
4 passed, then the bank determines that the transaction is valid.

5 The merchant, bank and customer are in this example engaged in a  
6 communications triad wherein each is communicating with the other two over the  
7 internet in an independent fashion.

8 The bank then communicates to both the merchant and customer that the  
9 purchase transaction has been authorized. The bank communicates assurance of  
10 payment to the merchant indicating that payment will be made to merchant's account  
11 with bank on the next business day. The merchant in many cases will accept the  
12 assurance of payment as sufficient for the merchant to proceed with shipment of the  
13 purchased goods or services.

14 The bank debits the customer account at or near the time the authorization is  
15 given. The bank also credits the merchant's account such as at nearly the same time  
16 or otherwise. The customer is subsequently billed for the transaction, such as on the  
17 next customer billing statement.

#### 18 **4.27 Example B**

19 In this example the customer and the merchant are already set up with the  
20 bank in accordance herewith. The customer contacts the merchant via the internet

1 as described. The customer initiates communications with the merchant using a first  
2 communications link. The customer then builds the order file but does not include  
3 customer account information sufficient to authorize goods, services or for receiving  
4 payment. Instead, the customer saves the order file with the merchant and maintains  
5 a record of the order file contents on the user's computer. The record of the order file  
6 includes merchant identification information, transaction identification, and an  
7 indication of the amount to be charged to the customer's account. The customer then  
8 discontinues communications with the merchant via the internet.

9 The customer thereafter initiates communications with the bank, such as via  
10 the internet. The user is prompted for his personal identification code and the user  
11 supplies such information. The bank performs the desired identification inquiry by  
12 comparing the user's personal identification code to the customer account information  
13 for this field. The bank also performs customer computer identification analysis using  
14 specially coded information contained on the user's authorized computer. The bank  
15 then analyzes the customer identity information and verifies that it is an active  
16 account. The bank verifies that the personal identification code is correct as an  
17 authorized user under the customer's account.

18 The user's computer includes bank programming which has an encryption key  
19 which varies as a function of the information previously written to the customer's  
20 computer by the bank, the time and date, and the number of transactions conducted  
21 by the customer with the bank. The bank then authenticates the user and customer

1 computer using such analyses. If these factors are successfully verified, then this  
2 serves as an authentication analysis indicating the authenticity of the user to use the  
3 customer account.

4 Further third party authentication is optionally provided by the bank performing  
5 an assessment of the caller identification information associated with the telephone  
6 line through which the customer is connected to the internet in the customer-bank  
7 communications linkage. The telephone line number information is verified against  
8 the related information contained in the bank's customer account information. If the  
9 caller identification information is verified, then additional authentication evidence is  
10 provided and the bank now has completed the authentication analysis of the user and  
11 customer account.

12 The customer computer then communicates to the bank computer information  
13 indicating the merchant being used in the purchase transaction and the transaction  
14 control number. The amount to be charged to the customer for the goods and/or  
15 services are also communicated to the bank. The bank then does a credit limit  
16 analysis for the customer account, and the amount requested for authorization is  
17 acceptable. The bank communicates to the user that the transaction is processing.

18 The bank then establishes a communications link with the merchant via the  
19 internet while the customer is in active or standby communications with the merchant.  
20 The bank performs any desired merchant identification inquiry, such as done with the  
21 customer. The bank also performs an authentication analysis by verifying that the

1 merchant computer is an authorized merchant computer using the bank's merchant  
2 account computer identification verification information.

3 With the above steps performed the bank is now in a position to perform a  
4 validation analysis for the transaction. Since the merchant, customer and user  
5 identifications have been verified and the credit limit analysis has successfully been  
6 passed, then the bank determines that the transaction is valid.

7 The bank is simultaneously engaged with the merchant and customer but the  
8 customer and merchant are not in active communication. The bank then  
9 communicates to both the merchant and customer that the purchase transaction has  
10 been authorized. The bank communicates assurance of payment to the merchant  
11 indicating that payment will be made to merchant's account with bank by the next  
12 business day. The merchant accepts the assurance of payment as sufficient for the  
13 merchant to proceed with shipment of the purchased goods.

14 The bank debits the customer account at the time the authorization is given.  
15 The bank also credits the merchant's account at nearly the same time. The customer  
16 is subsequently billed for the transaction on the next customer billing statement.

#### 17 **4.28 Example C**

18 In this example the customer and the merchant are already set up with the  
19 bank in accordance herewith. The customer contacts the merchant via the internet  
20 as described. The customer initiates communications with the merchant using a first

1 communications link. The customer then builds the order file but does not include  
2 sensitive customer account information. Instead, the customer saves the order file  
3 with the merchant and maintains a record of the order file on the user's computer.

4 The record of the order file includes customer and merchant identification  
5 information, transaction identification, an indication of the amount to be charged to  
6 the customer's account, an indication that the bank is being used to assure payment,  
7 and other information specifying essential and desired key information for the order  
8 being placed. The customer then places the order with the merchant via the internet.

9 The merchant thereafter initiates communications with the bank, such as via  
10 the internet. Information concerning the order file is in part or in whole communicated  
11 to the bank along with a request for authorization.

12 The bank then initiates communication with the customer, such as via the  
13 internet. The user is prompted for his personal identification code and the user  
14 supplies such information. The bank performs the desired identification inquiry by  
15 comparing the user's personal identification code to the customer account information  
16 for this information field. The bank also performs customer computer identification  
17 analysis using specially coded information contained on the user's authorized  
18 computer. The bank then analyzes the customer identity information and verifies that  
19 it is an active account. The bank verifies that the personal identification code is  
20 correct as an authorized user under the customer's account.



1 The user's computer includes bank interface programming which has an  
2 encryption key which varies as a function of the information previously written to the  
3 customer's computer by the bank, the time and date, and the number of transactions  
4 conducted by the customer with the bank. The bank then authenticates the user and  
5 customer computer using such analyses. If these factors are successfully verified,  
6 then this serves as an authentication analysis indicating the authenticity of the user  
7 to use the customer account.

8 Further third party authentication is optionally provided by the bank performing  
9 an assessment of the caller identification information associated with the telephone  
10 line through which the customer is connected to the internet in the customer-bank  
11 communications linkage. The telephone line number information is verified against  
12 the related information contained in the bank's customer account information. If the  
13 caller identification information is verified, then additional authentication evidence is  
14 provided and the bank now has completed the authentication analysis of the user and  
15 customer account.

16 The customer computer then communicates to the bank computer information  
17 indicating the merchant being used in the purchase transaction and the transaction  
18 control number. The amount to be charged to the customer for the goods and/or  
19 services are also communicated to the bank. The bank then does a credit limit  
20 analysis for the customer account, and the amount requested for authorization is  
21 acceptable. The bank communicates to the user that the transaction is processing.

1 The bank then establishes a communications link with the merchant via the  
2 internet while the customer is in active or standby communication with the merchant.  
3 The bank performs any desired merchant identification inquiry, such as done with the  
4 customer. The bank also performs an authentication analysis by verifying that the  
5 merchant computer is an authorized merchant computer using the bank's merchant  
6 account verification information.

7 With the above steps performed the bank is now in a position to perform a  
8 validation analysis for the transaction. Since the merchant, customer and user  
9 identifications have been verified and the credit limit analysis has successfully been  
10 passed, then the bank determines that the transaction is valid.

11 The bank is simultaneously engaged with the merchant and customer but the  
12 customer and merchant are no longer in active communication. The bank then  
13 communicates to both the merchant and customer that the purchase transaction has  
14 been authorized. The bank communicates assurance of payment to the merchant  
15 indicating that payment will be made to merchant's account with bank by the next  
16 business day. The merchant accepts the assurance of payment as sufficient for the  
17 merchant to proceed with shipment of the purchased goods.

18 The bank debits the customer account at the time the authorization is given.  
19 The bank also credits the merchant's account at nearly the same time. The customer  
20 is subsequently billed for the transaction on the next billing statement.

1 **4.29 Alternative Representation of Customer by Purchasing Agent**

2 The methods according hereto can also be practiced wherein the customer is  
3 represented by a buying agent. The buying agent can be a more traditional type  
4 buying agent whereby the customer appoints and authorizes the buying agent.  
5 Alternatively, the buying agent may be a computer service vested with various  
6 techniques for securing the most favorable purchasing on behalf of the customer.

7 **4.30 Alternative Representation of Merchant by Selling Agent**

8 The methods according hereto can also be practiced wherein the merchant is  
9 represented by a selling agent. The selling agent can be a more traditional type  
10 selling agent whereby the customer appoints and effectively authorizes the selling  
11 agent. Alternatively, the selling agent may be a computer service vested with various  
12 techniques for securing the most favorable selling price in behalf of the merchant.

13 **4.31 Bank Functions May be Divided or Substituted**

14 The description given herein is made as if the bank is a single legal entity.  
15 However, the functions of the bank may instead be performed by an agent or various  
16 agents which assume some or all of the bank's responsibilities and functions in  
17 accordance with the inventions. For example, the bank may have several subsidiary  
18 or sister corporations which perform some or all of the functions instead of or in  
19 support of the bank's performance of the methods according hereto.

#### 4.32 Alternative Quick Setup and Related Purchase Transaction

In still another alternative method according to the invention a potential customer is both setup and given credit in a series of steps preferably performed as explained below.

The procedure applies to certain situations wherein a new customer is more quickly set up to facilitate nearly immediate use of the customer account. The context of the procedure is explained with regard to a customer accessing a merchant web site for a merchant that is set up with a merchant account at the bank in accordance with the invention. The screen display at the merchant web site is provided with an icon or other indication that the merchant is a bank authorized merchant and that payment can be made employing the bank.

If a potential new customer clicks on the bank icon or otherwise indicates that the customer wants to set up a customer account with the bank, then the setup procedure is initiated. This can initially involve establishing a communications link between the customer and bank. Preferably, the initial setup communications link is via telephone voice line between the customer telephone and the bank setup telephone.

Alternatively, the potential customer may make some initial communications link via the internet in response to the potential customer's indication that it would like to set up an account with the bank.

1 The methods thus advantageously also include prompting the potential  
2 customer to call the bank setup telephone number. The bank setup telephone  
3 number can be a toll-free number, for example 1-800-000-0000. The prompting of  
4 the potential customer involves providing the potential customer with the telephone  
5 number to be used. The prompting also preferably includes instructing the potential  
6 customer that the telephone to be used in the voice telephone setup contact be the  
7 customer's or user's home number, or other customer telephone number that will be  
8 used in future communications sessions with the bank and/or merchants. Such  
9 customer or user telephone line is for convenience called the designated customer  
10 or user telephone line.

11 The prompting also preferably includes explaining that this designated  
12 telephone line is also preferably a telephone line which has caller identification  
13 information available concerning the customer or user, and that such caller  
14 identification information is not in a blocked status. This is desired since in at least  
15 some of the preferred methods the telephone caller identification information is used  
16 by the bank in processing requests for setup, setup modification and requests for  
17 authorization to charge.

18 The potential customer then proceeds by telephoning or otherwise  
19 communicating in a setup mode communications linkage with the bank setup  
20 telephone line. The preferred setup mode communications linkage is a customer  
21 voice telephone line communicating with a bank voice telephone line.

1 The methods also include establishing the setup mode communications linkage  
2 between the potential customer and the bank setup communications line.

3 The methods further preferably include providing some or all of the customer  
4 account setup information by voice or other communications mode which is  
5 preferably not via the internet. The providing of customer account information will  
6 typically include voice communication of customer information such as explained  
7 above in connection with typical setup procedures.

8 The quick setup methods further employ a quick setup authenticating step or  
9 steps performed while the potential customer is in the setup mode on-line  
10 communications linkage with the bank. A preferred mode of quick setup  
11 authentication is to use a pre-existing charge card which can be checked for validity  
12 and credit limit quickly while the potential customer is on the telephone with the bank  
13 setup department. Alternatively, the bank may have rapid processing access to a  
14 credit report or abbreviated credit report to use in lieu of or in addition to using the  
15 pre-existing account information. This could be bank-originated information or  
16 third-party originated information.

17 The quick or instant setup procedure speeds setup by providing to the potential  
18 customer a setup option wherein the customer provides credit authentication  
19 information which can be immediately accessed by the bank and used to provide  
20 setup approval and authorization for credit using the customer account with the bank.  
21 One example of such credit authentication information is the indicated pre-existing

1 credit card. Other quickly accessible customer authentication and credit information  
2 may also be alternatively used.

3 In this process the customer provides via the voice telephone line or other  
4 setup communications linkage, an indication of the bank card customer account  
5 number, customer name and expiration date, similar to making a charge over the  
6 phone using the pre-existing credit card. The bank then utilizes conventional  
7 technology to seek authorization to charge the potential customer's pre-existing  
8 charge account. The authorization request to the pre-existing charge card account  
9 may or may not result in an actual charge to the pre-existing account.

10 Full setup of the customer account with the bank may be subsequently  
11 completed, yet the quick setup procedure will allow an initial transaction or  
12 transactions to be approved by the bank against the new customer's account.

13 When using the quick setup procedure, the bank will typically limit the credit  
14 amount to a low initial value until the full setup procedure can subsequently be  
15 completed. At that time the bank may indicate that additional credit is available  
16 beyond the quick setup credit limit given.

17 After the new customer has been approved using the quick setup procedure,  
18 then the steps for activation and use will be the same as those described above.

#### **4.33 Alternative Process with Assurance to New Merchant**

The quick or instant credit procedure described above can also be used in the context of quick set up of a new merchant account in the same or an analogous manner to that described above in connection with quick set up of a new customer account. For example, the merchant can use the merchant's pre-existing bank card, e.g. a MASTERCARD™. This can be used to authenticate the merchant to allow a merchant account to be established with the bank on a quick basis similar to the quick set up procedure for customers described above. Subsequent completion of the full setup procedure is preferred.

#### **4.34 Further Explanation Concerning Aspects of the Invention**

The invention may reside in an individual feature or features or in combinations of features as set out herein in summarized and exemplary forms. Although every novel combination has not been individually discussed, it must be understood that the various features, combinations, subcombinations and functions recited herein are appropriately combined with one or more of the other such features, combinations, subcombinations and functions to serve as bases for claiming of patent protection on this invention.



1 **4.35 Further Indication of Aspects of the Invention**

2 The invention can be considered in a number of different combinations and  
3 subcombinations. Exemplary combinations and subcombinations are set out below.  
4 It should be appreciated that additional combinations and subcombinations can also  
5 be defined consistent with the description given herein.

6 A method for conducting a purchase of goods or services over the internet, the  
7 purchase being made by a customer using a merchant for goods or services which  
8 are to be provided at a delivery location, and wherein a bank assures payment to the  
9 merchant for said purchase, comprising —

10 creating a customer account with the bank, said customer account being  
11 associated with said customer; the customer account also having:

12 customer computer identification information associating said  
13 customer account with at least one authorized customer  
14 computer which is identifiable by the bank;

15 customer delivery address information associating said customer  
16 account with at least one authorized customer delivery  
17 address;

18 creating a merchant account, said merchant account being associated with  
19 said merchant; said merchant having a merchant internet site at which the merchant  
20 offers goods or services;

1 displaying to the customer on the merchant internet site indicia which indicates  
2 customers can choose to pay the merchant using said bank;

3 detecting when a customer chooses to pay the merchant using said bank;

4 obtaining computerized order information placed from an ordering computer  
5 which indicates an order for chosen goods or services being sought for purchase by  
6 the customer using the merchant; said obtaining computerized order information  
7 including:

8 obtaining an order delivery address indicating a location for the  
9 delivery of the goods or services associated with the order;

10 obtaining ordering computer identification information from the  
11 ordering computer;

12 verifying said order delivery address by comparing said order delivery address  
13 to said customer delivery address information kept by the bank to assure it is an  
14 authorized customer delivery address;

15 verifying said ordering computer identification information from the ordering  
16 computer by comparing said ordering computer identification information to said  
17 customer computer identification information kept by the bank to assure it is an  
18 authorized customer computer;

1 communicating assurance of payment to the merchant in connection with said  
2 order upon successful verification of said order delivery address and said ordering  
3 computer identification information.

4 A method for conducting a purchase of goods or services over the internet, the  
5 purchase being made by a customer using a merchant via a merchant internet site  
6 selling goods or services to be provided at a delivery location, and wherein a bank  
7 assures payment to the merchant for said purchase, comprising –

8 creating a customer account with the bank, said customer account being  
9 associated with said customer; the customer account also having:

10 customer computer identification information associating said  
11 customer account with at least one authorized customer  
12 computer which is identifiable by the bank;

13 customer delivery address information associating said customer  
14 account with at least one authorized customer delivery  
15 address;

16 detecting when a customer chooses to pay the merchant using said bank;

17 obtaining computerized order information placed from an ordering computer  
18 which indicates an order for chosen goods or services being sought for purchase by  
19 the customer using the merchant; said obtaining computerized order information  
20 including:

1 recording an order delivery address indicating a location for the  
2 delivery of the goods or services associated with the order;  
3 obtaining computer identification information from the ordering  
4 computer;  
5 verifying said order delivery address by comparing said order delivery address  
6 to said authorized delivery address information kept by the bank;  
7 verifying that said computer identification information from the ordering  
8 computer is from an authorized customer computer associated with said customer  
9 account;  
10 communicating assurance of payment to the merchant in connection with said  
11 order upon successful verification of said order delivery address and said computer  
12 identification information.  
13 A method for conducting a purchase of goods or services over the internet, the  
14 purchase being made by a customer using a merchant, said merchant having an  
15 internet site at which the merchant offers goods or services; and wherein a bank  
16 assures payment to the merchant, comprising –  
17 creating a customer account with the bank that is associated with said  
18 customer;  
19 providing the customer account with customer account information associated  
20 therewith which includes:

1 authorized user identification information associating said  
2 customer account with at least one authorized user  
3 identification code;

4 customer computer identification information associating said  
5 customer account with at least one authorized customer  
6 computer, said at least one authorized customer computer  
7 being identifiable by the bank;

8 detecting when said customer chooses to pay the merchant using said bank;  
9 recording information indicating the customer has placed an order which seeks  
10 to obtain using the merchant ordered goods or services;

11 obtaining computer identification information about an ordering computer from  
12 which said order has been placed;

13 verifying said computer identification information is from an authorized  
14 customer computer associated with the customer account;

15 recording user identification code information provided by a user of the order  
16 computer when placing said order;

17 verifying said user identification code information by comparing the user  
18 identification code information so provided in comparison to authorized user  
19 identification codes associated with the customer account;

1 communicating assurance of payment to the merchant upon successful  
2 verification of said computer identification information and said user identification  
3 code information.

4 A method for authorizing a purchase of goods or services over the internet, the  
5 purchase being made by a customer using a merchant, said merchant having an  
6 internet site at which the merchant offers goods or services; and wherein a bank  
7 authorizes the purchase and assures payment to the merchant, comprising:

8 detecting when a customer chooses to pay the merchant using said bank;

9 obtaining order information indicating the customer has placed an order which  
10 seeks to obtain goods or services using the merchant;

11 obtaining information about an order computer from which said order has been  
12 placed;

13 accessing customer verification information which includes authorized  
14 customer computer information which indicates one or more computers which have  
15 been authorized for use in placing orders;

16 verifying said order computer used in placing the order is an authorized  
17 customer computer;

18 communicating to the merchant assurance of payment information upon  
19 successful verification in said verifying step.

1 A method for conducting a purchase of goods or services over the internet, the  
2 purchase being made by a customer using a merchant for goods or services which  
3 are to be provided at a delivery location, and wherein a bank assures payment to the  
4 merchant for said purchase, comprising –

5 creating a customer account with the bank, said customer account being  
6 associated with said customer; the customer account having verification information  
7 contained therein, said verification information including information about at least  
8 one of the following verification parameters:

9 customer delivery address information associating said customer  
10 account with at least one authorized customer delivery  
11 address;

12 customer computer identification information associating said  
13 customer account with at least one authorized customer  
14 computer which is identifiable by the bank;

15 authorized user identification information associating said  
16 customer account with at least one authorized user  
17 identification code; or,

18 authorized telephone caller identification information including at  
19 least one authorized telephone caller identification code;

1 creating a merchant account, said merchant account being associated with  
2 said merchant; said merchant having a merchant internet site at which the merchant  
3 offers goods or services;

4 detecting when a customer chooses to pay the merchant using said bank;

5 communicating to the bank computerized order information originating in  
6 connection with an order for chosen goods or services being sought using the  
7 merchant by a user from an ordering computer;

8 said step of communicating to the bank being performed in connection with  
9 obtaining computerized information about at least one of the following verification  
10 variables:

11 an order delivery address indicating a location for the delivery of  
12 the goods or services associated with the order;

13 ordering computer identification information obtained from the  
14 ordering computer;

15 ordering user identification information obtained from the ordering  
16 user when the order is placed;

17 ordering telephone caller identification information obtained when  
18 the order is placed;



1 validating said order by the bank using said computerized order information  
2 and the verification information kept by the bank in connection with said customer  
3 account;

4 communicating assurance of payment to the merchant in connection with said  
5 order upon successful validation of said order.

6 A method for conducting a purchase of goods or services over the internet, the  
7 purchase being made by a customer using a merchant for goods or services which  
8 are to be provided at a delivery location, and wherein a bank assures payment to the  
9 merchant for said purchase, comprising –

10 creating a customer account with the bank, said customer account being  
11 associated with said customer; the customer account having verification information  
12 contained therein, said verification information including information about at least  
13 one of the following verification parameters:

14 customer delivery address information associating said customer  
15 account with at least one authorized customer delivery  
16 address;

17 customer computer identification information associating said  
18 customer account with at least one authorized customer  
19 computer which is identifiable by the bank;

1 authorized user identification information associating said  
2 customer account with at least one authorized user  
3 identification code; or,  
4 authorized telephone caller identification information including at  
5 least one authorized telephone caller identification code;  
6 detecting when a customer chooses to pay the merchant using said bank;  
7 communicating to the bank computerized order information originating in  
8 connection with an order for chosen goods or services being sought using the  
9 merchant by a user from an ordering computer;  
10 said step of communicating to the bank being performed in connection with  
11 obtaining computerized information about at least one of the following verification  
12 variables:  
13 an order delivery address indicating a location for the delivery of  
14 the goods or services associated with the order;  
15 ordering computer identification information obtained from the  
16 ordering computer;  
17 ordering user identification information obtained from the ordering  
18 user when the order is placed;  
19 ordering telephone caller identification information obtained when  
20 the order is placed;

1       qualifying said order by the bank using said computerized order information  
2 and the verification information kept by the bank in connection with said customer  
3 account;

4       communicating assurance of payment to the merchant in connection with said  
5 order upon successful qualification of said order.

6       A method for purchasing of goods or services and assuring payment over the  
7 internet, the purchase being made by a customer using a merchant, said merchant  
8 having an internet site at which the merchant offers goods or services; and wherein  
9 a bank authorizes the purchase and assures payment to the merchant, comprising:

10       obtaining computerized order information indicating a customer desires to  
11 place an order which seeks to obtain goods or services using the merchant;

12       communicating the order information to the merchant;

13       providing customer information to the bank in connection with said order  
14 information;

15       accessing customer verification information by the bank, said customer  
16 verification information being previously set up by the customer with the bank;

17       verifying that the customer order information provided in connection with said  
18 order information is associated with said customer;

19       verifying that order delivery address information is an authorized delivery  
20 address associated with the customer;

1 providing delivery address information to the merchant in connection with said  
2 order;

3 communicating from the bank to the merchant assurance of payment  
4 information upon successful verification in said verifying steps.

5 A method for facilitating purchasing of goods or services and assuring payment  
6 over the internet, the purchase being made by a customer using a merchant, said  
7 merchant having an internet site at which the merchant offers goods or services; and  
8 wherein a bank validates the purchase and assures payment to the merchant,  
9 comprising:

10 telephoning the bank by the customer using a caller identification phone line  
11 associated with the customer;

12 providing the bank with customer account information from the customer using  
13 said caller identification phone line;

14 verifying that the customer account information given from the customer using  
15 the caller identification phone line is consistent with account setup verification  
16 information which includes the caller identification information available when the  
17 customer uses the caller identification phone line;

18 creating a customer account with the bank, said customer account being  
19 associated with said customer and having customer account information including  
20 customer account verification information;

1 obtaining order information indicating a customer desires to place an order  
2 which seeks to obtain goods or services using the merchant;

3 delivering the order information to the merchant;

4 providing customer information to the bank in connection with said order  
5 information;

6 accessing customer verification information by the bank, said customer  
7 verification information being previously set up by the customer with the bank;

8 verifying that the customer order information provided in connection with said  
9 order information is associated with said customer;

10 communicating from the bank to the merchant assurance of payment  
11 information upon successful verification in said verifying steps.

12 A method performed by a bank for processing a purchase of goods or services  
13 over the internet, the purchase being made by a customer using a merchant via a  
14 merchant internet site selling goods or services to be provided at a delivery location,  
15 and wherein the bank assures payment to the merchant for said purchase,  
16 comprising –

17 creating a customer account with the bank, said customer account being  
18 associated with said customer; the customer account also having:

customer computer identification information associating said  
customer account with at least one authorized customer  
computer which is identifiable by the bank;  
customer delivery address information associating said customer  
account with at least one authorized customer delivery  
address;  
detecting when a customer chooses to pay the merchant using said bank;  
obtaining computerized order information placed from an ordering computer  
which indicates an order for chosen goods or services being sought for purchase by  
the customer using the merchant; said obtaining computerized order information  
including:  
receiving an order delivery address indicating a location for the  
delivery of the goods or services associated with the order;  
obtaining computer identification information from the ordering  
computer;  
verifying said order delivery address by comparing said order delivery address  
to said authorized delivery address information kept by the bank;  
verifying that said computer identification information from the ordering  
computer is from an authorized customer computer associated with said customer  
account;

1 communicating assurance of payment to the merchant in connection with said  
2 order upon successful verification of said order delivery address and said computer  
3 identification information.

4 A method performed by a bank for processing a purchase of goods or services  
5 over the internet, the purchase being made by a customer using a merchant, said  
6 merchant having an internet site at which the merchant offers goods or services; and  
7 wherein a bank assures payment to the merchant, comprising –

8 creating a customer account with the bank that is associated with said  
9 customer;

10 providing the customer account with customer account information associated  
11 therewith which includes:

12 authorized user identification information associating said  
13 customer account with at least one authorized user  
14 identification code;

15 customer computer identification information associating said  
16 customer account with at least one authorized customer  
17 computer, said at least one authorized customer computer  
18 being identifiable by the bank;

19 detecting when said customer chooses to pay the merchant using said bank;

1 recording information indicating the customer has placed an order which seeks  
2 to obtain using the merchant ordered goods or services;

3 obtaining computer identification information about an ordering computer from  
4 which said order has been placed;

5 verifying said computer identification information is from an authorized  
6 customer computer associated with the customer account;

7 recording user identification code information provided by a user of the order  
8 computer when placing said order;

9 verifying said user identification code information by comparing the user  
10 identification code information so provided in comparison to authorized user  
11 identification codes associated with the customer account;

12 communicating assurance of payment to the merchant upon successful  
13 verification of said computer identification information and said user identification  
14 code information.

15 A method performed by a bank for authorizing a purchase of goods or services  
16 over the internet, the purchase being made by a customer using a merchant, said  
17 merchant having an internet site at which the merchant offers goods or services; and  
18 wherein a bank authorizes the purchase and assures payment to the merchant,  
19 comprising:



1 detecting by the bank when a customer chooses to pay the merchant using  
2 said bank;

3 obtaining by the bank order information indicating the customer has placed an  
4 order which seeks to obtain goods or services using the merchant;

5 obtaining by the bank information about an order computer from which said  
6 order has been placed;

7 accessing customer verification information which includes authorized  
8 customer computer information which indicates one or more computers which have  
9 been authorized for use in placing orders;

10 verifying said order computer used in placing the order is an authorized  
11 customer computer;

12 communicating from the bank to the merchant assurance of payment  
13 information upon successful verification in said verifying step.

14 A method for a bank authorizing a purchase of goods or services and assuring  
15 payment over the internet, the purchase being made by a customer using a  
16 merchant, said merchant having an internet site at which the merchant offers goods  
17 or services; and wherein a bank authorizes the purchase and assures payment to the  
18 merchant, comprising:

19 detecting by the bank when a customer chooses to pay the merchant using  
20 said bank;

1 obtaining by the bank order information indicating the customer has placed an  
2 order which seeks to obtain goods or services using the merchant;

3 obtaining by the bank order information about an order computer from which  
4 said order has been placed;

5 obtaining by the bank order information about an order delivery address to  
6 which said order is to be sent;

7 accessing customer verification information which includes authorized  
8 customer computer information which indicates one or more computers which have  
9 been authorized for use in placing orders;

10 verifying said order computer used in placing the order is an authorized  
11 customer computer;

12 verifying said order delivery address is an authorized customer delivery  
13 address;

14 communicating from the bank to the merchant assurance of payment  
15 information upon successful verification in said verifying steps.

16 A method performed by a bank for authorizing a purchase of goods or services  
17 and assuring payment over the internet, the purchase being made by a customer  
18 using a merchant, said merchant having an internet site at which the merchant offers  
19 goods or services; and wherein a bank authorizes the purchase and assures payment  
20 to the merchant, comprising:

1 detecting by the bank when a customer chooses to pay the merchant using  
2 said bank;

3 obtaining by the bank order information indicating the customer has placed an  
4 order which seeks to obtain goods or services using the merchant;

5 obtaining by the bank order information about an order computer from which  
6 said order has been placed;

7 obtaining by the bank order information about an order delivery address;

8 accessing customer verification information which includes authorized  
9 customer computer information which indicates one or more computers which have  
10 been authorized for use in placing orders;

11 verifying said order computer used in placing the order is an authorized  
12 customer computer;

13 verifying said order delivery address is an authorized customer delivery  
14 address;

15 communicating from the bank to the merchant an authorized delivery address  
16 and assurance of payment information upon successful verification in said verifying  
17 steps.

18 A method performed by a bank for authorizing a purchase of goods or services  
19 and assuring payment over the internet, the purchase being made by a customer  
20 using a merchant, said merchant having an internet site at which the merchant offers

1 goods or services; and wherein a bank authorizes the purchase and assures payment  
2 to the merchant, comprising:

3 detecting by the bank when a customer chooses to pay the merchant using  
4 said bank;

5 obtaining by the bank order information indicating the customer has placed an  
6 order which seeks to obtain goods or services using the merchant;

7 obtaining by the bank order telephone caller identification information from  
8 which said order has been placed;

9 accessing customer verification information which includes authorized  
10 customer computer information which indicates one or more computers which have  
11 been authorized for use in placing orders;

12 verifying said order computer used in placing the order is an authorized  
13 customer computer;

14 verifying said order telephone caller identification information is an authorized  
15 customer telephone caller identification;

16 communicating from the bank to the merchant an assurance of payment  
17 information upon successful verification in said verifying steps.

18 A method performed by a bank for authorizing a purchase of goods or services  
19 over the internet, the purchase being made by a customer using a merchant for

1 goods or services which are to be provided at a delivery location, and wherein a bank  
2 assures payment to the merchant for said purchase, comprising –

3       creating a customer account with the bank, said customer account being  
4 associated with said customer; the customer account having verification information  
5 contained therein, said verification information including information about at least  
6 one of the following verification parameters:

7               customer delivery address information associating said customer  
8               account with at least one authorized customer delivery  
9               address;

10              customer computer identification information associating said  
11              customer account with at least one authorized customer  
12              computer which is identifiable by the bank;

13              authorized user identification information associating said  
14              customer account with at least one authorized user  
15              identification code; or,

16              authorized telephone caller identification information including at  
17              least one authorized telephone caller identification code;

18       detecting by the bank when a customer chooses to pay the merchant using  
19 said bank;

1 obtaining by the bank computerized order information originating in connection  
2 with an order for chosen goods or services being sought by a user from an ordering  
3 computer;

4 said step of obtaining by the bank computerized order information being  
5 performed in connection with obtaining computerized information about at least one  
6 of the following verification variables:

7 an order delivery address indicating a location for the delivery of  
8 the goods or services associated with the order;

9 ordering computer identification information obtained from the  
10 ordering computer;

11 ordering user identification information obtained from the ordering  
12 user when the order is placed;

13 ordering telephone caller identification information obtained when  
14 the order is placed;

15 validating said order by the bank using said computerized order information  
16 and the verification information kept by the bank in connection with said customer  
17 account;

18 communicating from the bank to the merchant assurance of payment upon  
19 successful validation of said order.

1 A method performed by a merchant for conducting a purchase of goods or  
2 services over the internet, the purchase being made by a customer using the  
3 merchant for goods or services which are to be provided at a delivery location, and  
4 wherein a bank assures payment to the merchant for said purchase, comprising –

5 displaying to the customer on the merchant internet site indicia which indicates  
6 customers can choose to pay the merchant using said bank;

7 detecting when a customer chooses to pay the merchant using said bank;

8 obtaining computerized order information placed from an ordering computer  
9 which indicates an order for chosen goods or services being sought for purchase by  
10 the customer using the merchant; said obtaining computerized order information  
11 including:

12 obtaining an order delivery address indicating a location for the  
13 delivery of the goods or services associated with the order;

14 obtaining ordering computer identification information from the  
15 ordering computer;

16 submitting said order delivery address to the bank for verification of said order  
17 delivery address kept by the bank to assure it is an authorized customer delivery  
18 address;

19 verifying said ordering computer identification information from the ordering  
20 computer by comparing said ordering computer identification information to said

1 customer computer identification information kept by the bank to assure it is an  
2 authorized customer computer;

3 receiving assurance of payment from the bank to the merchant in connection  
4 with said order upon successful verification of said order delivery address and said  
5 ordering computer identification information.

6 A method performed by a customer for conducting a purchase of goods or  
7 services over the internet, the purchase being made by a customer using a merchant  
8 for goods or services which are to be provided at a delivery location, and wherein a  
9 bank assures payment to the merchant for said purchase, comprising –

10 creating a customer account with the bank, said customer account being  
11 associated with said customer; the customer account having verification information  
12 contained therein, said verification information including information about at least  
13 one of the following verification parameters:

14 customer delivery address information associating said customer  
15 account with at least one authorized customer delivery  
16 address;

17 customer computer identification information associating said  
18 customer account with at least one authorized customer  
19 computer which is identifiable by the bank;



1 authorized user identification information associating said  
2 customer account with at least one authorized user  
3 identification code; or,  
4 authorized telephone caller identification information including at  
5 least one authorized telephone caller identification code;  
6 detecting when a customer chooses to pay the merchant using said bank;  
7 communicating from the customer to the bank computerized order information  
8 originating in connection with an order for chosen goods or services being sought  
9 using the merchant by a user from an ordering computer;  
10 said step of communicating from the customer to the bank being performed in  
11 connection with computerized information about at least one of the following  
12 verification variables:  
13 an order delivery address indicating a location for the delivery of  
14 the goods or services associated with the order;  
15 ordering computer identification information obtained from the  
16 ordering computer;  
17 ordering user identification information obtained from the ordering  
18 user when the order is placed;  
19 ordering telephone caller identification information obtained when  
20 the order is placed.

1 A method for establishing a customer account with a bank which is used to pay  
2 merchants in connection with internet purchase transactions for goods or services,  
3 comprising:

4 creating a customer account with the bank, said customer account being  
5 associated with said customer and having customer account information; said  
6 customer account information including customer computer identification information  
7 associating said customer account with at least one authorized customer computer  
8 which is identifiable by the bank while the customer is in communication over the  
9 internet.

10 A method for establishing a customer account with a bank which is used to pay  
11 merchants in connection with internet purchase transactions for goods or services,  
12 comprising:

13 telephoning the bank by the customer using a caller identification phone line  
14 associated with the customer;

15 providing the bank with customer account information from the customer using  
16 said caller identification phone line;

17 verifying that the customer account information given from the customer using  
18 the caller identification phone line is consistent with account setup verification  
19 information which includes the caller identification information available when the  
20 customer uses the caller identification phone line;

1 creating a customer account with the bank, said customer account being  
2 associated with said customer and having customer account information; said  
3 customer account information including customer computer identification information  
4 associating said customer account with at least one authorized customer computer  
5 which is identifiable by the bank while the customer is in communication over the  
6 internet.

7 A method for establishing a customer account with a bank which is used to pay  
8 merchants in connection with internet purchase transactions for goods or services,  
9 comprising:

10 telephoning between the bank and the customer to provide oral explanation of  
11 customer account information using a caller identification phone line associated with  
12 the customer, said oral explanation of customer account information including:

13 customer name information;

14 at least one authorized customer delivery address;

15 at least one authorized user identification code;

16 verifying that the customer account information given from the customer using  
17 the caller identification phone line is consistent with account setup verification  
18 information which includes the caller identification information available when the  
19 customer uses the caller identification phone line;

1 creating a customer account with the bank, said customer account being  
2 associated with said customer and having customer account information; said  
3 customer account information including:

4 customer computer identification information associating said  
5 customer account with at least one authorized customer  
6 computer which is identifiable by the bank while the  
7 customer is in communication over the internet;

8 customer delivery address information associating said customer  
9 account with at least one authorized customer delivery  
10 address;

11 authorized user identification information associating said  
12 customer account with at least one authorized user  
13 identification code.

14 A method for purchasing of goods or services and assuring payment over the  
15 internet, the purchase being made by a customer using a merchant, said merchant  
16 having an internet site at which the merchant offers goods or services; and wherein  
17 a bank authorizes the purchase and assures payment to the merchant, comprising:

18 obtaining order information indicating a customer desires to place an order  
19 which seeks to obtain goods or services using the merchant;

20 delivering the order information to the merchant;

1 providing customer verification information to the bank;

2 accessing customer verification information by the bank, said customer  
3 verification information being previously set up with the bank;

4 verifying that the order information is associated with the customer using the  
5 customer verification information;

6 providing delivery address information to the merchant from the bank in  
7 connection with said order;

8 communicating from the bank to the merchant assurance of payment  
9 information upon successful verification in said verifying step.

10 A method for purchasing of goods or services and assuring payment over the  
11 internet, the purchase being made by a customer using a merchant, said merchant  
12 having an internet site at which the merchant offers goods or services; and wherein  
13 a bank authorizes the purchase and assures payment to the merchant, comprising:

14 obtaining by the bank computerized order information indicating a customer  
15 desires to place an order which seeks to obtain goods or services using the  
16 merchant;

17 communicating the at least some of the order information from the bank to the  
18 merchant;

19 providing customer information to the bank in connection with said order  
20 information;

1 accessing customer verification information by the bank, said customer  
2 verification information being previously set up by the customer with the bank;

3 verifying that the customer order information provided in connection with said  
4 order information is associated with said customer;

5 verifying that order delivery address information is an authorized delivery  
6 address associated with the customer;

7 providing delivery address information to the merchant in connection with said  
8 order;

9 communicating from the bank to the merchant assurance of payment  
10 information upon successful verification in said verifying steps.

11 A method for purchasing of goods or services and assuring payment over the  
12 internet, the purchase being made by a customer using a merchant, said merchant  
13 having an internet site at which the merchant offers goods or services; and wherein  
14 a bank authorizes the purchase and assures payment to the merchant, comprising:

15 obtaining order information indicating a customer desires to place an order  
16 which seeks to obtain goods or services using the merchant;

17 delivering a first portion of the order information to the merchant using a  
18 customer computer;

19 delivering a second portion of the order information to the merchant via a bank  
20 computer;

1 providing customer information to the bank in connection with said order  
2 information;

3 accessing customer verification information by the bank, said customer  
4 verification information being previously set up by the customer with the bank;

5 verifying that the customer information provided in connection with said order  
6 information is associated with said customer;

7 communicating from the bank to the merchant assurance of payment  
8 information upon successful verification in said verifying step.

9 A method for validating a purchase of goods or services over the internet, the  
10 purchase being made by a customer using a merchant, said merchant having an  
11 internet site at which the merchant offers goods or services; and wherein a bank  
12 authorizes the purchase and assures payment to the merchant, comprising:

13 detecting when a customer chooses to pay the merchant using said bank;

14 obtaining order information indicating the customer has placed an order which  
15 seeks to obtain goods or services using the merchant;

16 obtaining information about an order computer from which said order has been  
17 placed;

18 accessing customer verification information which includes authorized  
19 customer computer information which indicates one or more computers which have  
20 been authorized for use in placing orders;

1 verifying said order computer used in placing the order is an authorized  
2 customer computer;

3 validating the order.

#### 4 **4.36 General and Interpretational Explanation**

5 Various forms and aspects of the invention have been described. It should be  
6 understood that the invention may in alternative forms include one or more of the  
7 aspects or features shown in one embodiment implemented into another  
8 embodiment. Thus the various combinations of features shown herein can be  
9 combined in such alternative ways to further set out alternative forms of the invention.

10 The invention has been described in compliance with the disclosure  
11 requirements. In doing so the invention has necessarily been described in language  
12 more or less specific as to structural and methodical features. However, it is  
13 understood that the invention is not necessarily limited to the specific features shown  
14 and described, since the features and methods disclosed herein comprise preferred  
15 forms of putting the invention into effect, and cannot describe all options for  
16 implementation. The invention is, therefore, claimed in its various forms or  
17 modifications to the full extent allowed by law.